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30 H. P. BLISS

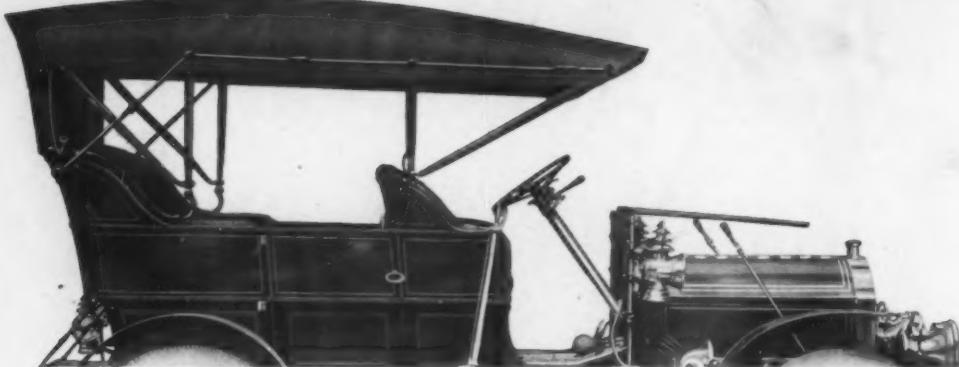
The Finest American Motor Car

DOUGLAS ANDREWS

SELLING AGENT

1623 Broadway

NEW YORK



This is the Pierce Great Arrow, 28-32 H. P., with straight tonneau body, cape top and folding glass front. Price without top or glass front, \$4000. Cape top, \$200 extra. Folding glass front, \$50 extra.

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In the famous Glidden Trophy run the Pierce Arrow went one thousand miles without a single adjustment. More than that, it did not require an expert chauffeur or mechanic to do this. The performance can be duplicated by any American gentleman with a Pierce car. If you are interested, we will send booklets and technical description.

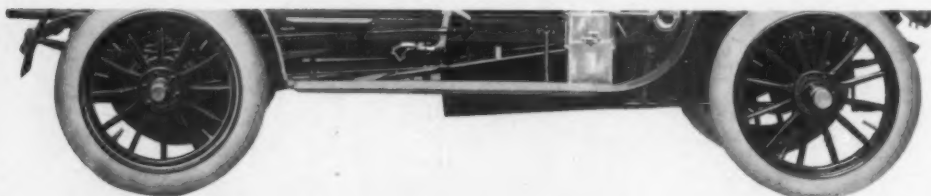
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The Automobile Magazine

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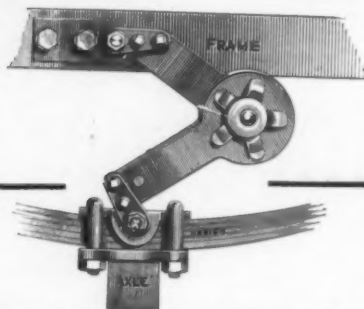
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New model absolutely self-adjusting. Requires no attention after application.

Adopted by the Pierce Great Arrow, Locomobile, Matheson, Richard-Brasier, Peugeot, Napier, Gobron-Brillié

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At the Druggists', or we will mail a package anywhere in the United States on receipt of price.

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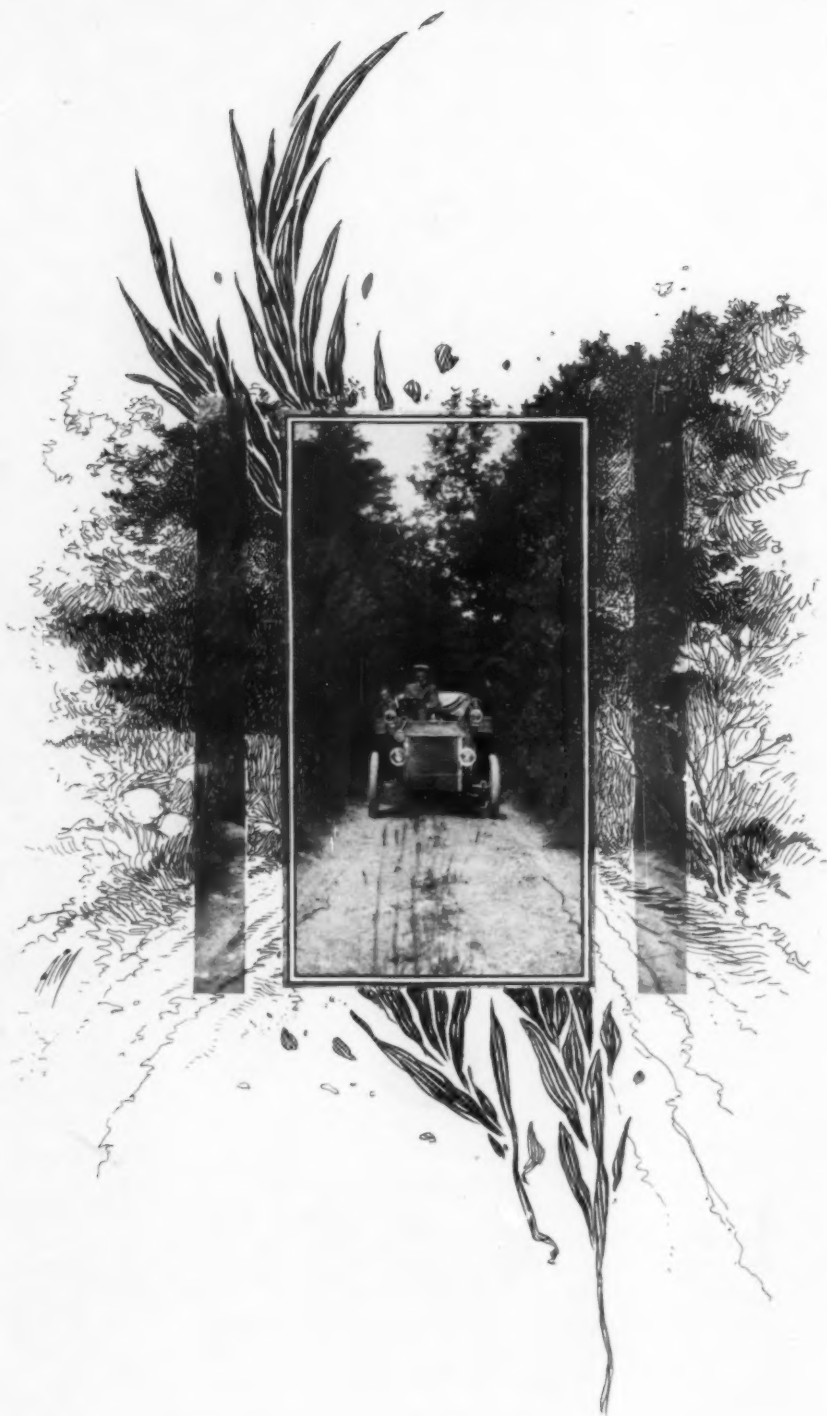
To Keep Lamp Reflectors Clean

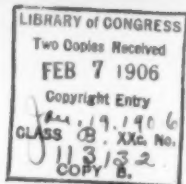
Heat of the intense degree produced by the acetylene gas flame, as well as the products of combustion given off by it, are found to be detrimental to the reflectors of lamps wherein acetylene is used, yet seemingly little attention has been given to providing a preventative of either the tarnishing or the consequent destruction which is surely sooner or later brought about. A method of overcoming this has been devised on "the other side." It is nothing more or less than a glass chimney held in place over the flame by light spring steel clips carried by the reflector itself. This chimney is in the shape of a hood, and not only carries off the products of combustion, but prevents the heat thereof from coming in direct contact with the polished surface of the reflector. The lamp is further provided with an asbestos disk to protect the top from the heat.

Sand stowed in a large tank, from which it can be sifted automatically to any or all parts of the building in such a manner as to smother a fire effectively, is a new idea to be used in the new telephone company's exchange at Indianapolis, Ind., and is one which should especially commend itself to garage keepers.

Compounding the Gas Engine

It is a well recognized requirement of the successful compound gas engine that the passage between the cylinders for the gas already expanded in the high pressure cylinder must be as short as possible, so that only a minimum of heat will be lost before the entrance of the gas to the low pressure cylinder. But the efficient accomplishment of all this is attended by the difficulty of burnt valves, which rapidly ensue unless some means of





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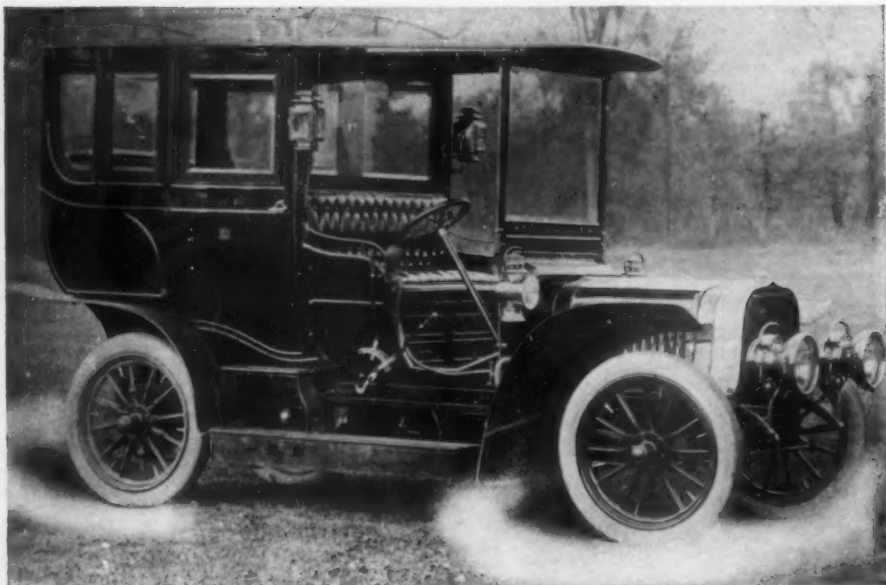
Story of the Shows

Being the Second Pictorial Review,
with Summaries of New York's
Two January Exhibitions

NO previous year in the history of automobiling witnessed a situation at all like that presented during the eight days beginning January 13, 1906. For four successive winters the metropolis had its one non-competitive exhibition of motor cars, equipments, sundries, etc., which naturally came to be known as the "National Show," without effective protest from Chicago or elsewhere. Competition had not yet become keen along these lines. At the end of that time the industry had grown to that point where the largest available building became far too small, and some sort of division was inevitable in the very nature of things in the young but tremendously vigorous automobile industry.

Even as late as a year ago, however, the present more-and-more visible lines of rivalry between the Licensed Association and the Unlicensed (using these terms for brevity and convenience), had not been very clearly drawn. It was a period of armed truce, and advantage was taken of the opportunity to promote an "Importers' Exhibition," during the third week of January, 1905, which was at least an interesting one, if not en-





ONE OF THE BIG POPE-TOLEDOS

Of the factories controlled by the Pope interests, the one at Hartford, Conn., is devoted to cars of excellent value at the moderate prices at which they are sold. The Indianapolis, Ind., plant produces the Pope-Waverly line of electric vehicles. The third and undoubtedly the greatest of the trio is devoted to the manufacture of the very highest grade of American cars at corresponding prices. It is one of the leading establishments of its kind in the world, and the accompanying cut shows one of its 1906 line.

That line consists of several regular models, including a 20-25 H. P. double side entrance at \$2,800, a 30-35 H. P. front entrance at \$3,200, a 35-40 H. P. double side entrance at \$3,500 and a 50-60 H. P. car at \$6,000. In addition the same concern builds special cars to order in 20, 30, 35, 40, 50, 60 H. P. and upwards. These, with landaulets, limousines and a 4-cylinder Gentleman's Roadster, 20 H. P., make possibly a larger showing than any other individual plant in America.

Some of the features to which particular attention may be called are the flexibility of the engine, permitting speeds of from $5\frac{1}{4}$ to 60 miles an hour without change of gear, and a marked reduction in the weight of both the car and the motor, the result being that 1 H. P. is supplied for every 34 pounds of car weight. This is made possible by the use of the new chrome steel, of 210,000 pounds tensile strength, together with the liberal use of aluminum in all parts to which it is applicable in motor car manufacture. The problems of decreased weight and weight distribution have been given more study than ever before by The Pope Motor Car Co., Toledo, Ohio; and this car is one of the results.

tirely satisfactory in all its aspects. The large growth of another year and the well-known desire of very many people to see the domestic and foreign products side by side, while it made a double show inevitable, required a division of forces and exhibits along new lines.

The timely completion of the fine 69th Regiment Armory, Lexington avenue and 26th street, less than a good stone's throw from Madison Square Garden, and the availability of the same dates for both, created as fortunate a situation as could be expected in a metropolis crowded with midwinter functions, but having few real show places. Gradu-

ally widening, the breach between the Licensed and Unlicensed manufacturers was aided materially by the natural gravitation of things. Months ago the Licensed people took the Garden absolutely for three years. The reasonably expected counter action was the leasing of the new armory by the Unlicensed people, and thus it became two representative shows instead of one.

Aside from the double entrance fee paid by the visitor at both places (an additional charge without visible result upon the attendance, it is needless to say), this solution of the problem was probably the best possible thing under

the circumstances. To bring everything under one roof had long become an impossibility, and a visible basis of real competition was an incentive not to be overlooked nor underestimated. It is probable that the unprecedented thorough preparation on both sides was due in some degree to a jealous regard for what the other might be doing to encourage public interest and attendance. At any rate, more and better advertising was done by each management than ever before.

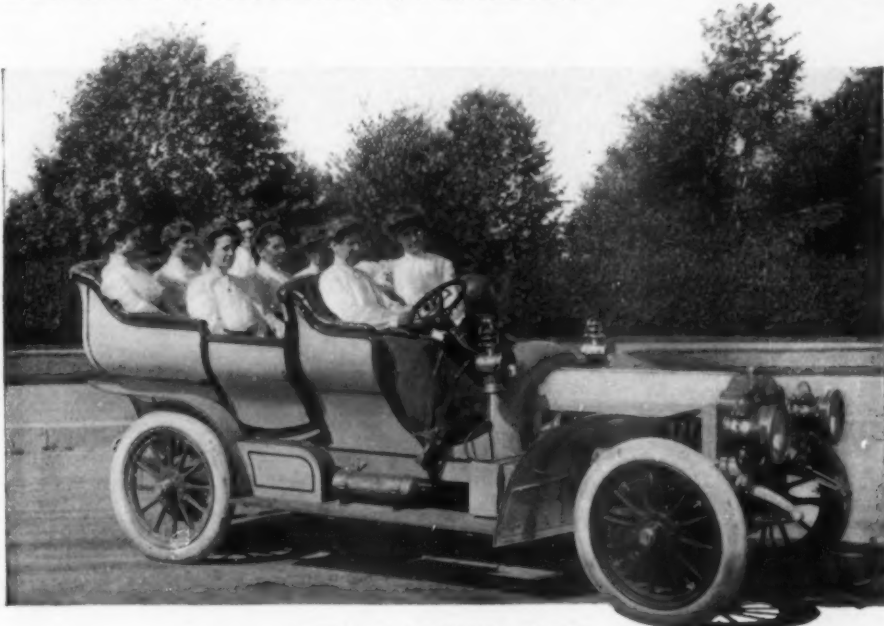
There was certainly plenty to see at both places, and probably few visitors felt equal to the task of looking over the exhibits of the two in one afternoon or evening. As a result, show trips to New York were longer on an average

than heretofore—a fact much commented upon by the proprietors and managers of the leading hotels. The return of the Automobile Club of America to show management probably added something to the social prestige of the Armory exhibition, though the advertising "catch line" of the management, "The Old Show in the New Armory," might be criticized a bit if one were looking for that sort of thing. All the old-timers at least recognized the outdoor poster which has done similar duty for at least three years, and ought by this time to be retired on a pension. But everyone seemed to be too busy trying to master the exhibits to notice minor details like that.

As usual, the opening show date

A decided hit has been made by the E. R. Thomas Motor Car Co., Buffalo, N. Y., in making an absolute guaranty of a 60-miles-an-hour speed on all their regular stock cars. Of course comparatively few owners ever have reason to run at that speed, but a surplus of mechanical energy is a good thing to have, especially in emergencies.

In the new model a number of changes have been made from 1905; the automobile as a whole certainly looks and rides better than the corresponding model of a year ago, and that is saying a lot. Seats five to eight people, all fronting forward; has four-speed Hess-Bright ball bearing transmission, four powerful brakes, best forgings throughout, fifteen Hess-Bright bearings and one roller. Among other specifications are: 50 H. P., 4-cylinder vertical motor, of equal bore and stroke (5½ inches); mechanically operated inlet and exhaust valves. Wheel base, 117 inches; "standard" tread, sheet steel frame; dash of aluminum, curved. Larger tonneau and wider side-entrance doors. Price, \$3,500. Additional information of the Thomas line has been given in the advertising pages of THE AUTOMOBILE MAGAZINE for three or four months past; further particulars from the factory or any Thomas agent.



THE 1906 "THOMAS FLYER"



marked the official beginning of 1906 in the automobile and kindred industries. That it was an auspicious beginning, no fair-minded visitor could question after even the briefest mental summary of the exhibits at either the Garden or the Armory. The first permanent impression was undoubtedly that never before has the purchaser of an automobile had the wide choice of machines that is offered him today. This impression was carried through the busy week, and was a potent factor in the sales totals of each exhibition.

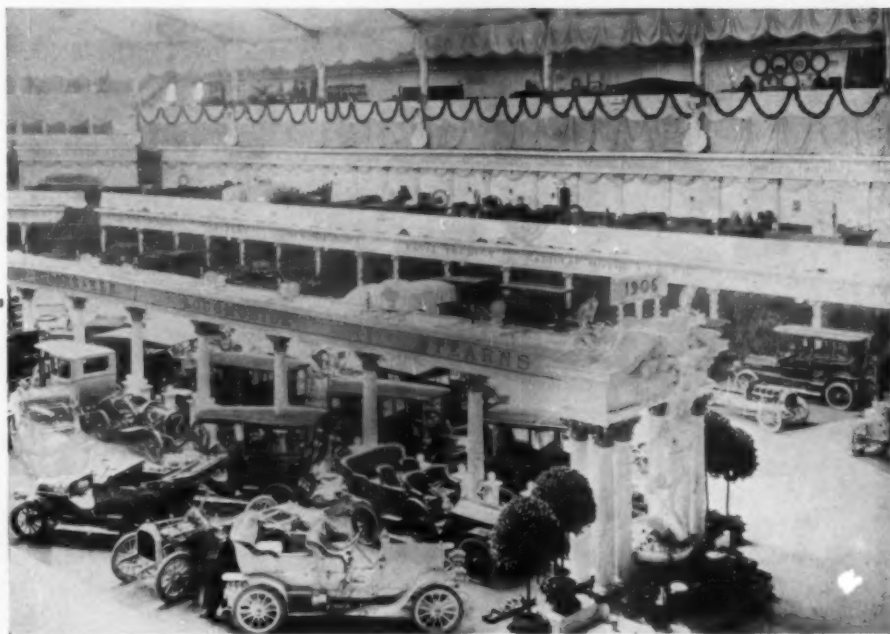
The brisk, toning weather (more like early autumn than midwinter) kept the demonstrating cars busy all day, and the departure and return of the experimental vehicles was watched by a curious crowd that frequently blocked the ordinarily less used sides of the two big squares, so that it was difficult at times to secure access to the buildings. Not all the purchasers, however, asked to try the cars, and in no previous show

was there such readiness to make selections on the reputations of the leading makers. When purchasers are willing to do this it proves better than much argument possibly could that the American manufacturers have raised the standard so high that a reputable name is sufficient proof that the car will give ample satisfaction. Incidentally the consistent advertiser is now getting his just rewards.

A special point was made in the preparation and thorough decoration of both buildings. Instead of leaving this really important matter to the individual ideas of each exhibitor, always resulting in anything like harmony, each management took up the decoration scheme months ago, and worked up the artistic possibilities of each exhibit as had never before been seen in this country. In France, of course, the decorations are an integral part of the annual automobile shows, of which the eighth annual has just closed. In America, on the contrary, artistic display has been more often absent than present in our industrial exhibitions—the great world's fairs, of course, aside.

The color scheme at the Garden was principally in white and gold, the chief features being staff columns every ten feet supporting classic cornices containing the signs of each exhibitor. Bunches of electric lights were placed both artistically and conveniently about the building. At the entrance the visitor saw first the "Poster Girl," "The Chauffeur," and the "Automobile Girl" in staff work. Under the "Poster Girl" was a fountain of running water on which different colored lights were played. That the heroic figures and columns represented the work of many months was not difficult to believe.

Speaking in summaries, Madison Square Garden housed about 225 exhibitors, while the Armory list was



INTERIORS MADISON SQUARE GARDEN

nearly as long. More than 100 manufacturers of complete automobiles, American and European, had their 1906 models on display in the two buildings. Numerically, the Armory had more imported cars on exhibition than Madison Square Garden, but in the latter building the cars shown included practically all of those European machines whose names have become familiar to American automobilists. Of the imported machines in the Armory, on the contrary, several made their first public appearance in this country. A number of the foreign exhibits in both shows were made up of cars brought direct to New York from the recent Salon d'Automobile in Paris, the exhibits having been prepared especially for exhibition purposes for the annual shows of Paris and New York.

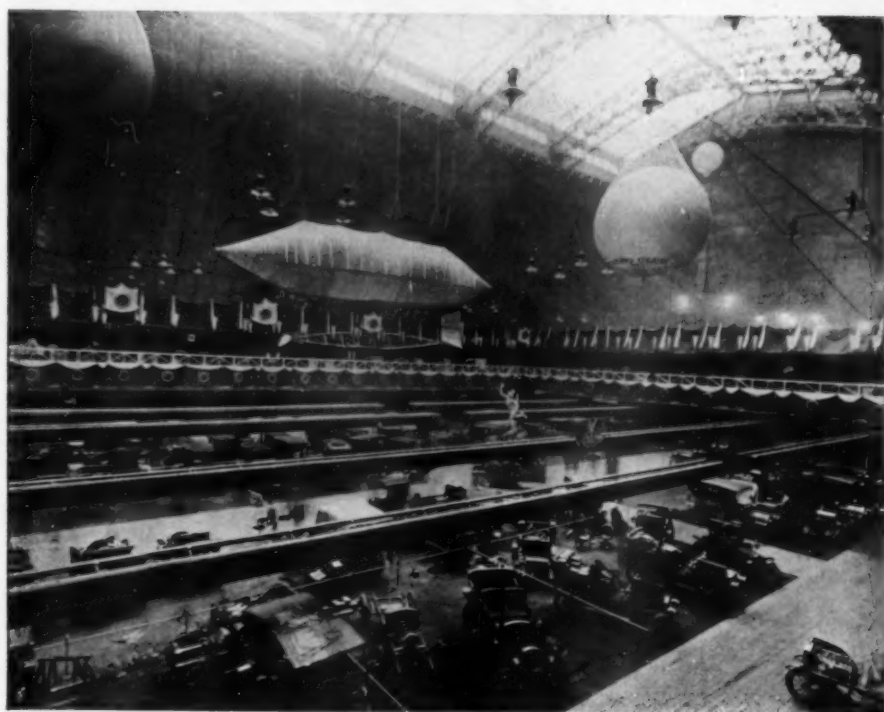
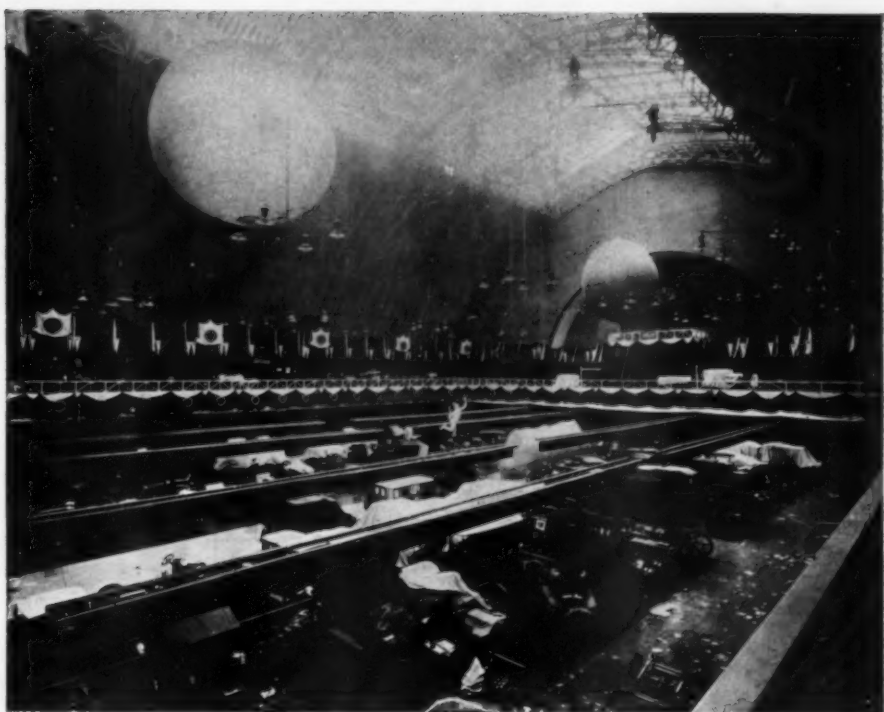
In both exhibitions the same general plan of space allotment was followed, pleasure cars on the main floor, commercial vehicles in the basement and the tire and accessory exhibits in the galleries or upper floors. In the Garden this plan of separation was followed closest, as none but gasoline pleasure cars were shown on the main floor, the electric pleasure vehicles being placed in the restaurant, where there were also a few exhibits of gasoline pleasure cars. In the Garden were thirty different makes of pleasure cars, eleven imported cars, eight

electric vehicles and seven types of commercial cars, a total of fifty-six different kinds.

A combined list of exhibitors at both places forms a roster of the home industry such as has never before been gathered together in a single year. Quite a number of new names will be noticed, the products of some of them experimental, perhaps, but the greater number substantial, enterprising and courageous concerns, with nothing against them except newness, and no objection to that as long as they can make good their claims. The list of importations is also larger than in any previous year, notwithstanding the constant gain of the American industry over the imported contingent.

Following are the names of the different cars shown during the week, in alphabetical order, irrespective of the place of their exhibition. Only a reader well acquainted with the personnel of the industry will be able to pick out any absentees pretending to do much if any business in the United States at the present time: Acme, Aerocar, American Mercedes, Apperson, Ardsley, Argus, Aster, Austin, Autocar, Autocar Equipment, Atlas, Baker, Bartholomew, Berkshire, Berliet, Buffalo, Buick, Cadillac, Cantano, Carey, Clement - Bayard, Cleveland, C. G. V., Columbia, Columbus, Crawford, Commercial, Compound,





INTERIORS ARMORY SHOW

Corbin, Daimler, Darracq, Dayton, Decauville, De Dietrich, Delaunay - Belleville, De Leon, Dolson, Duryea, Elmore, Fiat, Ford, Franklin, Frayer - Miller, Gallia, Grout, Haynes, Hewitt, Hotchkiss, Iroquois, Jackson, Kirk, Knox, Lane, Lausden, Leon-Bollee, Logan, Lozier, Locomobile, Matheson, Marion, Martini, Maxwell, Mercedes, Mitchell, Moline, Mors, Moon, McCrea, Napier, National, Newcomb, Northern, Oldsmobile, Packard, Panhard, Peerless, Peugeot, Pierce, Pope-Hartford, Pope-Toledo, Pope-Tribune, Pope-Waverley, Premier, Pungs-Finch, Queen, Rainier, Rapid, Renault, Reo, Richard-Brasier, Rochet - Schneider, Royal, Spyker, Simplex, Stearns, Stevens-Duryea, St. Louis, Studebaker, Thomas, Vehicle Equipment, Viqueot, Walter, Waltham - Orient, Wayne, Welch, White, Windsor, Winton, York, Zust.

The thought suggests itself: how many industries could show an equal diversity of name or an equal range and variety of product, irrespective of the time and money spent in up-building it? Probably not one. Every year since the beginning of automobile manufacture in the United States, the designers and builders have broadened their lines and increased their efforts to meet the more-and-more exacting popular demands. This process has gone on until one may with confidence select a vehicle



for the special use required of it, making the selection either before, during or after the shows, and be sure that his investment has a fair equivalent in pleasure, travel or service, or more usually, in both.

Though the subject of the many different motor cars of 1906 is much too large and too complex to be reduced to a common focus, the double score of models shown and individually described in this and the January issue of THE AUTOMOBILE MAGAZINE, are strikingly representative of the whole family of the new American vehicles. From them the first-time purchaser may possibly figure out something to his liking and suited to his purse. If not, he may double or triple his observations without running out of material to choose from. If there are any who may have imagined the show co-extensive with the industry, they are entitled to another guess, as the boys sometimes say.

The American automobile industry is to-day one great experimental workshop, and the National shows are principally a convenient index to what is going on in a thousand places. After all, our most valuable information is gained from experiment and discussion. The wide-awake motorist is thoroughly alive to the fact that a working knowledge of the main principles of construction and operation is essential to the full and free enjoyment of the sport. It is all



THE BERKSHIRE AND BLISS LINES

Few, if any, newcomers in the automobile business have accomplished so much in so short a time as the Douglas Andrews Co., New York, selling agents for both the new Berkshire and new Bliss lines of cars. Long before either was ready for the market the Andrews Company were advertising their lines with good effect, and taking care of prospective customers at their Broadway store. As a result they were able to enter the field on a nearly equal basis with older concerns.

The Berkshire family consists of three up-to-date cars, the 16 H. P. at \$2,000; the 25 H. P. at \$2,500, and the 40 H. P. at \$4,500, all "made and tested in the Berkshires," from which fact the name originates. The light touring car (\$2,000 model) has wood body, seating 5 persons. Motor, vertical four-cylinder, water-cooled, 16 H. P. Transmission, sliding gear; three forward speeds and reverse. Ignition, dry cells, storage battery or magneto. Gasolene capacity, 20 gallons. Frame, pressed steel; brakes, transmission and rear wheel. Weighs 1,800 lbs.; wheel base, 98 inches.

The other light touring car (\$2,500), built in substantially the same lines, weighs 2,300 lbs. and has a wheel base of 115 inches. At \$4,500 is offered the Berkshire side entrance touring car; wood body, seating 7 persons. Motor, vertical six-cylinder, water-cooled; 40 H. P. Transmission, sliding gear; three speeds and reverse; drive, double chains; ignition, dry cells, storage battery or magneto. Gasolene capacity, 25 gallons. Frame, pressed steel; brakes, transmission and rear wheel. Weighs 3,000 lbs.; wheel base 118 inches.

As selling agent for the E. W. Bliss Company's new cars, the Douglas Andrews Co. showed in the Armory the first models made by this big Brooklyn engineering concern that were ever publicly displayed. The exhibit consisted of a chassis in rough finish and a big side entrance touring car with canopy top, the body finish being royal blue with white striping and blue leather upholstery. Particulars of this new line can be had from the selling agents; 1623 Broadway, New York. At the present writing but one model has been decided on, a four-cylinder, 30 H. P. chassis at \$5,000.



30 H. P. BLISS

very well to have good ideas and to evolve original conceptions, but actual value lies in a practical application of the principles involved. This can only be accomplished by careful, patient and long-continued experiment; and as long as the trade is busy with these problems, the public will neglect no opportunity to inspect the progress they are making.

Progress, as represented by parallel types of complete vehicles, is about the same everywhere, the individuality of the producer being more likely shown in incidental ways than conspicuously to the eye. In respect to power of motor, number of cylinders, kind of cooling devices and style of equipment, there is naturally a wider range for variety. Here, at least, due attention has been paid to the preferences of the public—in so far as these preferences are capable of realization in the present state of the industry.

A marked tendency toward increased power is noticeable in a great majority of

1906 models. Larger and more luxurious bodies are fitted, wheel-bases lengthened where necessary, and the side-entrance type has completely displaced the rear-door body. The limousine and closed bodies of other styles are strongly in evidence on gasoline, steam and electric chassis, and in many instances may be had as an extra equipment whenever the power plant is sufficient to care for the added weight. Naturally these tendencies have been accompanied by an average of somewhat higher prices, a by-result of which is better material, higher grade workmanship, and ampler equipment, as well as a refinement of detail. The difference in prices between the imported and American cars of similar type and power remains conspicuously wide (the duty largely controlling), but it is narrowing somewhat year by year.

Apparently the four-cylinder car, with its vertical engine, has come to be the standard type of adequately-powered touring car, and from now on details rather than fundamentals will occupy the time of designers and builders. So long as the latter engross attention the former are necessarily subordinated; and, contrariwise, when fundamentals give way to details, the latter improve at an amazing rate. Touring pleasures are largely dependent on comfort en route. It is no light undertaking to sit in a car sometimes for hours at a stretch, bowling along over all sorts of roads at a good pace; and if the seats are not roomy and comfortable—or even luxurious—their occupants soon become weary. In former years enthusiasm enabled the average tourist to overlook deficiencies of this kind, but with the progress of time more was first expected, then demanded. To this demand is due the advance in body construction and appointments; so automobile bodies to-day equal and sometimes





1906 "ST. LOUIS" TOURING CAR

New model of a car manufactured for several years in the city from which its name was taken, but now built in a fine new factory at Peoria, Ill. The cut shows a machine, four-cylinder, 30-34 H. P. vertical motor, underneath hood. Valves all duplicates, mechanically operated; all gears enclosed. Sliding gear transmission, three speeds forward and reverse, direct drive on the high gear; entire system integral with the motor.

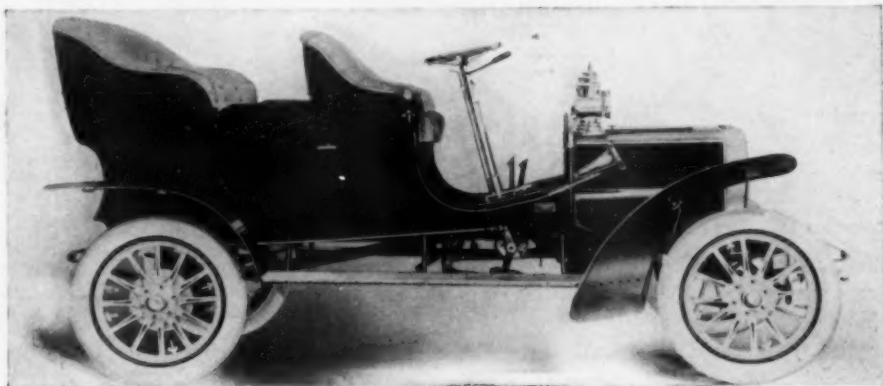
Multiple disk type clutch, closed by self-contained spring; released by foot pedal, which also throws on one set of brakes when desired. Ignition by storage battery; jump spark, four-cylinder coil mounted on dash. New style rack and pinion steering, with ball and socket joints to take up wear.

Wheel base, 104 inches; weight, 2,200 pounds; luxurious side entrance body and complete equipment. Speed can be ranged from 4 to 50 miles per hour. Equipment includes two brass searchlights, two brass side lights, rear signal, all necessary tools, spark plugs, horn, etc. Prices, \$2,200 and \$2,500. The St. Louis Motor Car Co., Peoria, Ill.

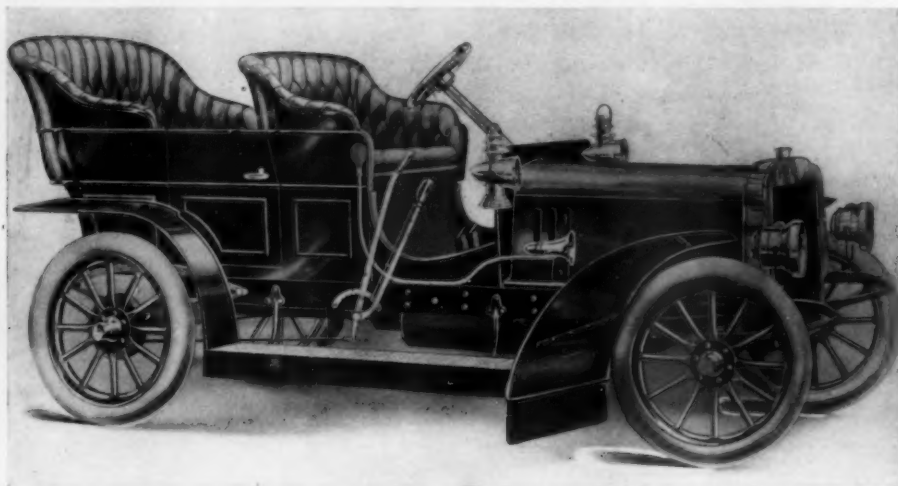
The Northern Mfg. Co., Detroit, Mich., offers to the public for 1906 a big, roomy tonneau, luxuriously upholstered, with wide side entrance doors; extra comfortable seat just the right height; easy pedal control. No side levers—no belts, chains and gaskets—no strut rods or truss rods—no vibration, no noise, and "no dust." This last advantage is secured by the large fan cast integral in the 24-inch flywheel, which sends a powerful blast of air toward the rear, counteracting the suction caused by the swiftly moving car, and blowing the dust away.

Shown in the illustration is the 18-20 H. P. model built for "comfort on the road." Cylinder heads cast integral with cylinders; crank case and gear case one mechanical unit; three-point suspension; four full-elliptic springs. Clutches and gears dirt and dust-proof, running in oil; clutch control on the steering column, easily reached by the operator. Price, \$1,800; "Limousine" pattern, \$2,500.

The manufacturers of this line have decided to make few changes in their popular little runabout for 1906. It will still have the 7 H. P., single cylinder horizontal motor, planetary transmission and chain drive, giving two forward speeds and reverse. The wheel base is 66 inches, track 55 inches, and the wheels are fitted with 28-inch by 3-inch detachable tires. To adapt the car to winter use or in stormy weather a folding hood and wind shields have been designed, and the comfortable appearance of the runabout so equipped is noted at the first inspection.



A NEW "SILENT NORTHERN"



FORD MODEL K—SIX CYLINDERS

The line of which this is one of the new representatives exemplifies first of all the personal confidence and enterprise of the moving spirit in the Ford Motor Co., Detroit, Mich. But while Mr. Ford has been waging his campaign of aggression (and incidentally of publicity) in behalf of the "independent" automobile manufacturers, he has not neglected the practical side of his now great business. For one thing he has helped to prove that the increase in number of cylinders, when accompanied by simplicity of design, has not only increased the flexibility and power of the car, but has reduced the troubles of the owner and user.

Among the specifications of Model K are: Motor, six cylinders, vertical; $4\frac{1}{4}$ -inch bore by $4\frac{1}{4}$ -inch stroke; 40 H. P.; speed, 50 miles per hour down to four miles per hour. Improved planetary transmission and clutch. Pressed steel frame; 114 inches wheel base; water-cooled system, circulation by gear pump. Perfected magneto ignition; mechanical oiler. Gasoline capacity, 15 gallons; good for 250 miles. Hub brakes, internal expansion, with lever control; emergency brake on driving shaft, controlled by foot lever. Springs, full elliptic rear and half elliptic front.

"Ford" direct drive construction. Ample roller bearings on rear axle, with ball bearing thrust (special design); ball bearings also on front wheels. Wheel steering (with Ford reduction gears), to take strain from steering over rough roads, an exclusive feature. Luxurious body, ample for five passengers; weight, 2,000 pounds. Price, \$2,500. Color as desired by purchaser. Equipment includes two side oil lamps, tail lamp and tubular horn.

excel the best examples of the carriage builder's art.

Along with the general adoption of the side entrance, many cars have been equipped with ingenious compartments for the tourist's baggage—in some cases little short of complete portmanteaus—and cleverly placed "pockets" for the easy and safe carrying of small articles. In the same process refinement of luxury has been sought at every possible point. This perfection of minor details means fewer failures of power, less breakage, and better, more satisfactory all-around service. The working parts of practically all machines have been rendered more and more accessible, so that examination of the motor or the transmission gear when out on the road is much simpler than formerly.

Although water-cooled motors are still very largely in the majority, there has been a marked increase in the number of automobiles made with motors of the air-cooling type. This applies also in high powers, whereas formerly air-cooled motors have been restricted almost entirely to low-powered cars. The time is rapidly approaching when the purchaser may be able to take his choice—allowing some special advantage to each—without questioning the claim of the air-cooled wing of the industry as was common two and three years ago. Within the past year (especially) the advance in popularity of the air-cooled motor has been very rapid; and public confidence has been won over.

An entirely new feature was intro-

duced this year by the Automobile Club of America in their Armory show, which may or may not have interfered with the universal homage paid to the automobile. Feeling that it should be the first to encourage the use of motors in the air, the club arranged for an exhibition by the Aero Club of America, which proved of interest to the public as well as to the enthusiasts of aerial navigation. In this section were exhibited every important development in aerostatics brought forth in this country, in addition to much from foreign sources.

Besides the balloons and airships of all forms, there were parachutes, aeroplanes, box and other kites, lifting machines, both with propellers and wind;

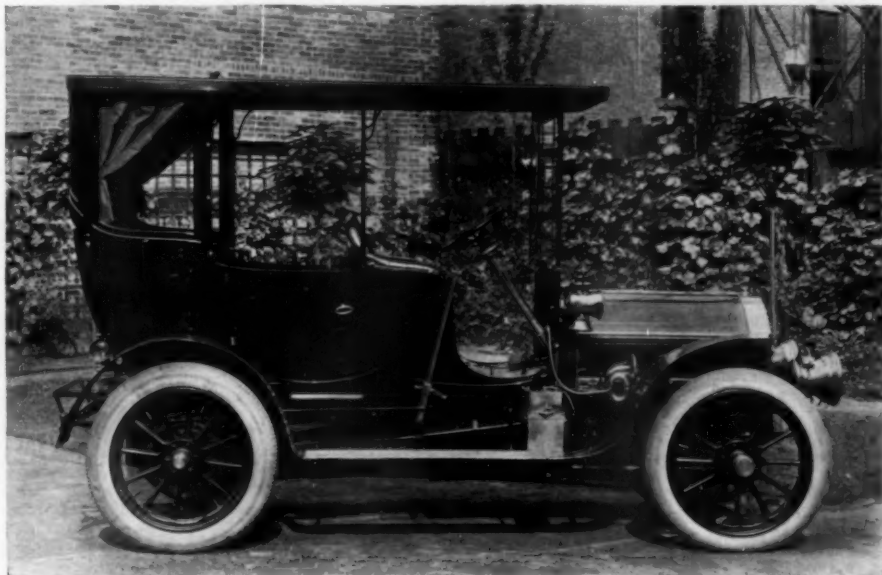
light-weight motors, meteorological instruments, a complete collection of the literature of mechanical flight, pictures of various flying machines, both in flight and at rest, and an exhibit of materials and accessories. There is no doubt that air flight is the next logical step, with a separate Aero Club exhibition a probable feature of the not distant future.

Visitors to the Armory found a pleasant diversion by ascending to the temporary theater on the fourth floor, where frequently, during afternoons and evenings, the Vanderbilt Cup Race was shown in "moving picture" fashion, as well as other vitagraph presentations of the Gordon Bennett Race, the Mount Washington "Climb to the Clouds," the Ormond-Daytona Beach Races, and re-

Three models comprise the regular line of 1906 automobiles manufactured by The George N. Pierce Co., Buffalo, N. Y. One is an 8 H. P. Stanhope, practically the same as in previous years. While not so much is heard of this as of the bigger and more expensive cars, it is a convenient and reliable runabout, selling at \$900 without top, or \$1,000 complete with top. Then come the "Great Arrows," 28-32 H. P. and 40-45 H. P.

The 28-32 is a straight tonneau body touring car. Wheel base, 107 inches; tread, 56 inches; pressed carbon steel frame. Whitlock type radiator. Side entrance tonneau; dark blue body and running gear; light blue striping. Wood artillery-type wheels, 34 inches; non-skid tires on rear wheels; extra tire carrier; four "shock absorbers." Price, \$4,000 without top; cape top, \$200 extra; folding glass front, \$50 extra.

A Victoria body, canopy top, with sliding glass front and semi-enclosed glass rear, are features of the 40-45 H. P. model, one of the de Luxe automobiles of the year. Price, with full equipment, \$5,350, or \$5,000 for the Victoria body without top. Additional regular equipment for 1906 includes gasoline tank gauge, showing at a glance the amount of gasoline in the tank, also an extra tire carrier. Either the 28-32 H. P. or the 40-45 H. P. chassis are fitted with landulet, suburban or opera coach bodies on special order.



THE PIERCE "GREAT ARROW"



cent airship doings on the other side of the Atlantic. Particularly was the Vanderbilt Cup Race interesting to many who read about it, without appreciating the wonderful bursts of speed by these racing monsters.

It is often erroneously thought that the prime factor of the mid-winter shows is the commercial profit to be derived from them. Naturally this phase receives considerable credit, and it is perfectly right that the actual sales value of the motor cars of to-day should have an important place in the consideration of visitors and subsequent buyers. This, however, is not the sole end of these exhibitions.

Were it all for a temporary or narrow end, the shows would not have come to this sixth reunion.

To one or two great central points are brought all the finest and most representative productions of the industry, before an audience unequaled in the world for purchasing power and critical

estimation. It is the supreme test of any manufactured product to place it in close juxtaposition with other productions of the same class and date. When the popular estimate of value secured in this manner is brought together and carefully weighed, there is certain to be something worth respectful listening to and careful heeding. From the coming together of so many machines, each representing the best ideas and methods of the leading factories, there is bound to be a mutual improvement and a merging of the best ideas and policies to the betterment of the whole list of American cars. Meanwhile the public is coming into first-hand acquaintance with the industry, to a mutual advantage.

The feeling par excellence at the shows is that of obtaining the best results for the time and labor spent—the free exchange of ideas, plans and experiences, all tending toward the improvement of the automobile beyond the possibilities of the previous January meeting. The result is a line of motor cars that surpasses, in successive annual waves, all that have gone before; a line that meets nearer than ever before the demands of the public. There is, of course, a natural evolution of the automobile as there is of any important invention. The keynote of showtime is found in the open generosity shown by those who have good ideas for the advancement and perfection of the motor-driven vehicle in presenting them, and the willingness of others to profit by what is there offered in so frank and friendly a spirit.

With the spread of the industry has come a thoroughgoing competition such as many people have been looking forward to for years; except that the oft-prophesied "cheap machine" has yet to make its appearance. Entirely aside from this, it is a factor of progress not to be despised. Ask the thoughtful



DURYEA TOURING PHAETON

The Duryea always has been a distinct line in American automobile manufacture, embodying the original ideas of the pioneer who builds and sells them. Our illustration shows the double-seated touring phaeton, three cylinders, 25-30 H. P., water-cooled motor, with top, which is included in the regular equipment. This is furnished without additional cost to the purchaser, and makes as much difference in the comfort as in the appearance of the car, especially in hot weather.

Finish, Brewster green, carmine gear; will seat 5 people comfortably. Clutch, double cone, steel against bronze. Transmission, planetary; two speeds and reverse; drive by single chain. Lubrication, automatic pressure feed; ignition make-and-break, magneto. Radiator, tubular with thermo-siphon and pump. Water capacity, 10 gallons; gasoline capacity, 11 gallons. Frame, armored bent wood.

Brakes, transmission and expanding internal on rear axle. Weighs 1,350 lbs.; wheel base, 90 inches; tread, 56 inches. Wheel diameter, 30 inches front, 36 inches rear; tires, Goodyear, or option, American, 3 inches front, 3½ inches rear. Car sold equipped with tools, oil lamps and rain aprons.

maker or agent what has been the main incentive in bringing out one machine improved over its predecessors, and he will probably tell you it is "competition" of the healthy "live and let live" sort.

The average manufacturer has been investing more capital to increase his output, to multiply the returns from sales, to get still more capital. He and his staff have been aiming always to improve the quality as well as to increase the quantity of the work turned out. Why? Largely because the opportunity ahead of the successful producer, coupled with the wide range of competition which he must meet, both domestic and foreign, makes it good policy for him to do it.

If any further argument were needed

to prove that here, as elsewhere, "competition is the mother of improvement," it would only be necessary to look into the history of some of the leading motor cars on the market to-day. How have they attained to that position? Very largely, it must be admitted, by inviting competition, and being willing to meet it point by point as it descends upon them, allowing the public to judge.

It has been the constant effort of every factor in the automobile industry to maintain, and where possible to increase, the features that make the particular production equal or superior to anything else which any competitor can offer. It is well known that only by accomplishing these results can an enviable and profitable position be per-

manently maintained; it is a question of self-preservation; of paying dividends on the investment; of progress or retrogression.

Eliminate competition and you would not only destroy the main incentive to general perfection of automobiles, but the interest of the public would soon begin to lag; and the need for these annual meetings of the trade and the public would be gone. Many of the current improvements are designed and carried through as much to gain a greater leverage of power to meet the increasing demands of competition as for any other one reason. Conversely, anything that destroys healthy competition necessarily takes away, in large measure, the incentive to progress in construction. Competition is not only the "life of trade," but the promise of the

greatest ultimate success for any growing industry.

Commercial vehicles are approaching an era of development which some predict will overshadow in time the pleasure side of automobiling. The American man with his accustomed clear-headed and keen-sighted business policies has quickly seen that the mechanically-propelled vehicles are worth his time and money. In the way of time-saving and endurance, to say nothing of the combined simplicity and economy of the great haulage cars, the balance seems weighted heavily. For commercial reasons as well as for the greater ease in procuring a certain result, large business interests have been quick to promote the usage of motor cars. It is only a question of time until the entire population will consider the prog-

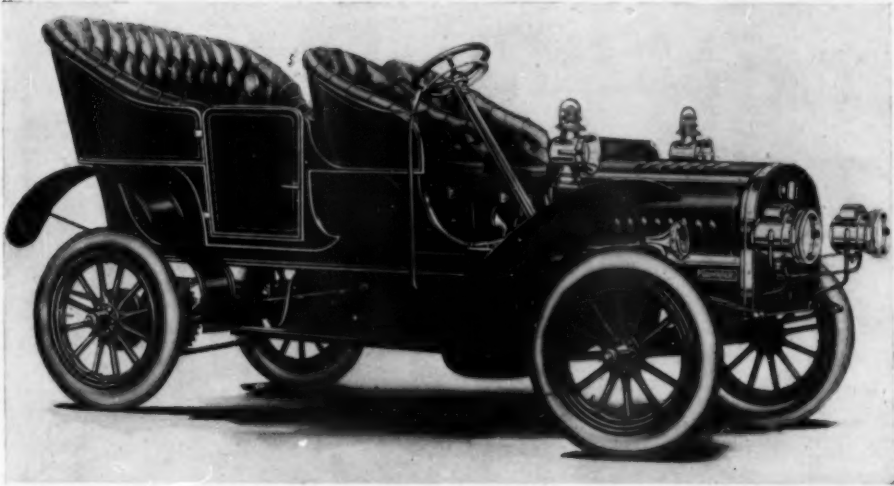
This type of car is built with either a 24-30 H. P. or 40-45 H. P. gasoline motor; apart from the engine and a few minor details, however, the two are exactly alike. The more powerful motor naturally increases the total weight, but only by about 150 pounds. Made by The Fairmount Engineering Works, Philadelphia, Pa.

Our illustration shows the larger-powered model; with a four-cylinder vertical engine, 40-45 H. P., 5-inch bore by 6-inch stroke; irreversible worm-and-segment steering gear; special change gear system. Double side entrance aluminum body; finish as desired by the purchaser; seats 7 persons comfortably. Transmission, sliding gear; 4 speeds forward and reverse; drive, double chain. Lubrication, mechanical force feed; ignition, jump spark with storage battery and high tension magneto.

Radiator, Whitlock type with fan in front and in flywheel. Water capacity, 8 gallons; gasoline capacity, 20 gallons, sufficient for most long trips. Frame, pressed steel; brakes, transmission and rear wheels. Weighs 2,700 lbs.; wheel base, 108 inches; tread, 56 inches; wheel diameter, 34 inches. Tires, Continental, 4½ inches front and rear. Price, touring equipment, \$5,000; with limousine on same chassis, \$6,000.



40-45 H. P. CHADWICK



RAMBLER SURREY TYPE 3

This new model is an elaboration of the well-known Type 1 for 1905, though the latter is continued for 1906 with such minor improvements as have suggested themselves during the past year. The power plant and chassis remain the same, except for a somewhat longer frame to accommodate a larger and longer body. The result is a general utility car with the elaborate design and finish of the higher-priced touring cars. It would be difficult to find greater value for the \$1,350 charged for this car by the makers, Thos. B. Jeffery & Co., Kenosha, Wis.

Capacity, five passengers; wheel base, 96 inches; frame, one piece pressed channel steel; springs full elliptic, 34 inches front, 38 inches rear. Tires, detachable, 30 inches by 3½ inches. Tread, 56½ inches. Steering, wheel with tilting pillar. Engine, two opposed cylinders. Power, 18 H. P., ample for grades up to 40 per cent. Speed, variable up to 35 miles per hour. Gasolene capacity, 12½ gallons, sufficient for 150 miles.

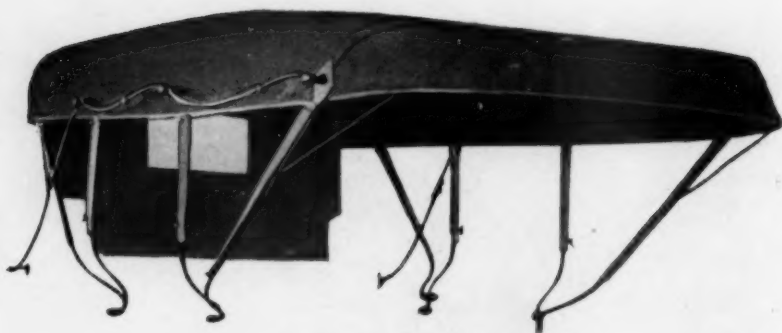
Carbureter, improved float feed automatic. Cooling, water, self-circulating without pump. Radiator, tubular, 75 sq. ft. cooling surface. Ignition, jump spark system, two vibrator coils. Spark timing, automatic by rotating governor. Transmission, improved planetary type, all spur gears. Axles, front, 2-inch seamless tube; rear rotating; all have either ball or roller bearings. Differential, spur gear in oil-tight and dust-proof case. Finish, Imperial blue; equipment, brass side, tail and two gas headlights with separate generator, brass horn, drop forged wrenches, oilers, pump and repair kit.

ress of the automobile industry as bound up with its own welfare. The old idea that this mode of travel and haulage could only concern the wealthy class was so erroneous that it has well-nigh disappeared.

Despite the great progress made by the American manufacturers, the importation business continues apparently as fixed and as prosperous as ever. Motor vehicles manufactured abroad have now, and will probably long continue to have, an important place in this country. Our principal home factories now can—and do—build machines equal in design and construction, power, speed and equipment to the world's best. But the importations not only give the purchasing public more distinctive models to choose from, but

they place and keep our designers and builders in close touch with the foremost European types. To this fact is largely due the very rapid progress of the past four years, practically overcoming the earlier start of the old established foreign workshops.

Only these automobiles already famous abroad find their way in any considerable numbers to the United States; none but these can any longer compare successfully with our home products. Again, the American tariff can only be paid by vehicles selling at a high average of prices. So the imported automobiles that become well established here are invariably worthy of their success. The time is nearly at hand, however, in the opinion of many farsighted men of the industry, when this country



SPRAGUE AUTO TOP

The very latest production of the famous Sprague Umbrella Co. Note the particularly effective curve on the bow iron, which are straight at the lower ends, drop forged and bound to stay where they belong. Altogether a top which is as substantial as it is attractive.

will sell in foreign markets as great values in automobiles as the importations amount to.

Exhaust for Pressure Creation

In the earlier types of car the gasoline tank was placed either on the dash, under the front seat, or in a flat tank set into the back of the seats.

Modern practice has, however, removed the tank in many of the larger cars to a position low down at the back of the chassis, whereupon it becomes necessary to lift the fuel in some way in order to feed it properly.

The most natural way of doing this, and the one first resorted to, was to

Some Statistics of the Two 1906 Shows

COMPLETE AUTOS

	At Both Shows	At Garden	At Armory
Machines displayed	311	142	169
Gasolene models	219	83	136
Electric models	36	26	10
Steam models	9	—	9
Electric commercial cars	21	19	2
Gasolene commercial cars	26	14	12
Motor cycles	12	—	12
Running gear construction—			
Pressed steel frames	232	113	119
Structural iron frames	23	9	14
Armored wood and other frames	56	20	36
Tubular front axles	105	42	63
Forged front axles	206	100	106
Full-elliptic springs	49	29	20
Semi-elliptic springs	224	110	114
Both types of springs	38	3	35

CONSTRUCTIVE FEATURES OF GASOLENE CARS

	At Both Shows	At Garden	At Armory
Water-cooled	220	84	136
Air-cooled	25	13	12
Four-cycle	241	94	147
Two-cycle	4	3	7
Four-cylinder vertical	189	82	107
Double-opposed horizontal	27	4	23
Two-cylinder vertical	10	3	7
One-cylinder horizontal	5	4	1
One-cylinder vertical	1	1	—
Six-cylinder vertical	7	2	5
Other patterns	6	1	5
Jump spark ignition	198	71	121
Make-and-break ignition	42	18	24
Both types of ignition	11	8	3
Batteries for ignition	147	55	92
Magneto or dynamo	50	22	28
Both batteries and magneto	48	20	28



ASTER CONVERTIBLE LIMOUSINE

The illustration shows the Edition de Luxe of a famous French line of automobiles, represented in this country by the Aster Co., 1591 Broadway, New York. Manufactured by Malicet & Blin, whose motor products have been used for many years by the foremost makers in France, England, Germany, the United States and other countries. The Convertible Limousine for 1906, equipped with a 30-35 H. P. 4-cylinder motor, sells complete for \$7,000.

Pressed steel frame, 117-inch wheel-base, constructed altogether by the Malicet & Blin firm. Four speeds forward and reverse, all actuated by one lever; sliding gear type, direct on the high speed. Double chain or shaft drive as preferred by the customer. Three brakes, strong and efficient, two acting on the rear hubs compensating and one on the transmission shaft, all three being of the internal expansion type. Both jump spark and make-and-brake ignition; new automatic carbureter.

Model XI, as this style is officially called, with its convertible limousine, has a seating capacity of seven people. Fully equipped with electric lights, enunciator and parcel holders. Two adjustable seats, which fold up when not in use; disappearing plate glass windows; all occupants when seated face toward the front of the car. One feature of this body is that it is also a comfortable winter car; upon removing the top, the owner has a luxurious touring body.

employ a pump which ran continuously, feeding into a sight feed cup mounted on the dashboard. From this it dropped by gravity to the carbureter, or overflowed back into the tank, as the case might be. As a makeshift, this arrangement answered the purpose very well, but still it was unsatisfactory in many ways. The pressure feed was first applied to the Daimler cars, which were also the first cars to use the low hung tank. A portion of the exhaust was shunted

off through a check valve to the top of the gasoline tank which resulted in lifting the fuel by simple displacement. This system has since come into pretty general use, and merits some discussion because of the frequent question as to its safety. There can be no danger of igniting the contents of the tank, however, because the gases are quite cool before reaching it, and as all possibility of flame being carried through is precluded by a fine screen, which acts on the well

known principle of the Davy lamp. There is, in fact, less danger in this than in any system which does not use pressure, as the pressure carried is not dangerously high, three or four pounds per square inch being sufficient ordinarily, and as any leakage is at once evidenced by its rapid fall.

It is often very convenient to use a branch from the pressure line to lift the lubricating oil, and it has also been proposed to use the exhaust for pumping the tires, a high pressure storage tank being carried for the purpose. This is hardly practical, however, for two reasons. In the first place, there is likelihood that there may be ingredients in the gas which would injure the material of the inner tubes, and besides the extreme permeability of carbon monoxide and car-

bon dioxide, which form its chief constituents, render it unfit for the purpose, as they would leak away rapidly. Another possible use of the exhaust is for pneumatic brakes. This also demands the installation of a high pressure tank.

Then They Killed Him

"Why," asked the cigarette-eating driver, "is acetylene gas like a merciful judge when you get brought up before him after being pinched by a cop for knocking forty per hour cold?"

Again silence, save for the Swede repair man drinking beer through his mustache.

"Because," babbled the cigaretter, "it mostly always make a fine light for an automobile. Ha, ha, ha!"

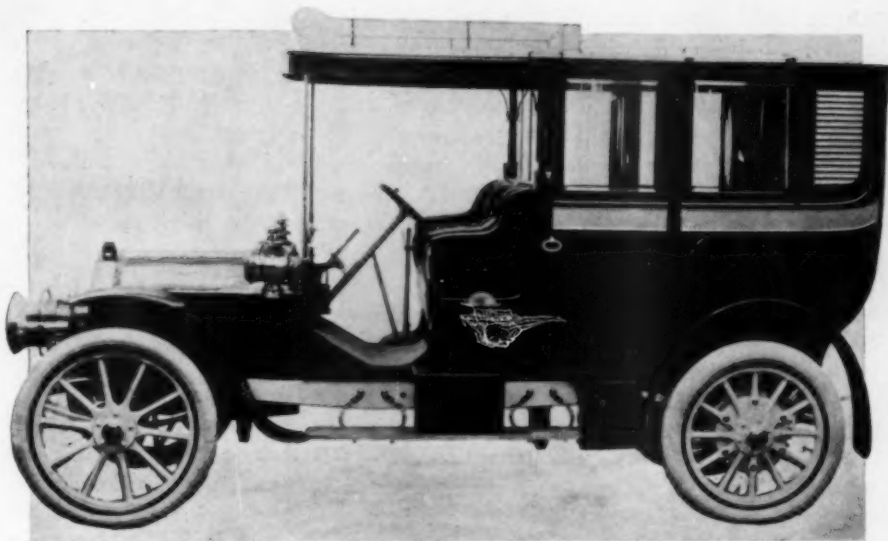
Superb value in materials, workmanship and experience—especially when price is considered—is the real basis of the popularity of this line after a comparatively brief period of contact with the public. So early, however, the home plant at Tarrytown, N. Y., has been outgrown, and it has been found necessary to increase facilities by the addition of two new factories, one at Pawtucket, R. I., and one at Chicago.

These three factories, with their 1,200 employees, will produce during the present year over 3,500 automobiles, of which 3,000 were contracted for prior to the Shows. Among the interesting specifications of the 16-20 H. P. touring car, shown in the illustrations, are these:

Two-cylinder, 16 H. P. gasoline motor, in front under hood; will develop 1 H. P. for each 90 pounds of weight. Three-point suspension; all working parts easily accessible in garage or on the road; multiple disk clutch, made of steel plates running in oil. Bevel gear drive, roller-bearing axles; roomy side entrance tonneau, seating two or three persons in rear, with two in front. Price, \$1,450. Maxwell-Briscoe Motor Co., Tarrytown, N. Y.



THE 16-20 H. P. MAXWELL, TOURING CAR



MARTINI SWISS TOURING CAR.

The automobile product of the leading rifle makers of Switzerland, whose factories at St. Blaise have been famous for a generation throughout Europe for their exquisite workmanship. Marine motors have been built successfully by the same firm for ten years. Palmer & Christie, New York, are sole importers and agents in the United States for the cars of this line.

Equipment of this car includes four-cylinder vertical, water-cooled motor, 30-40 H. P. Sliding gear transmission, giving four speeds forward and one reverse; double chain drive. Make-and-break ignition, low tension magneto. Cellular type radiator, with pump; brakes, differential and rear wheel. Pressed steel frame; weight of car 3,400 to 3,500 lbs.

Wheel-base, 116 inches; tread, 56 inches; wheel diameters, 36 inches; Michelin tires. Price, \$9,500. Lamps and horn included in regular equipment; top, \$150 extra. The cut shows the side entrance, "tulip" type body, with a seating capacity of seven persons.

Why One Road Remained Unimproved

By Jennie F. Simpson

SOME time since a movement was started by automobilists to build a stone road along one of the Jersey highways, and a committee in a motor car went from farmhouse to farmhouse with the petition, in order to secure the necessary signatures. The project was enthusiastically received, for the old road was about as bad as a bad Jersey road could be, and the matter went along as swimmingly as a raft at high tide, until a farmer of the fine old chin whiskers school was approached.

"Nice day, Josh," said the automobilist with the petition.

"Yaas," was the pessimistic reply,

"but I s'pose it will be stormy tomorrow."

"Crops doing all right?" asked the petitioner.

"Yaas," returned Josh, laconically, "but I s'pose they'll be a failure next year."

"Say, Josh," continued the committeeman, "how would you like to sign this petition for a stone road in front of your farm?"

"Don't know about thet," was the doubtful rejoinder. "Will hev ter think it over."

"It will be of immense value to you, and will enhance the value of your farm," urged the petitioner.

"Don't know about thet," said Josh. "Besides, I hain't sellin' ther farm."

That is all that could be done with Josh that day, so the car and the committee went on their way and called again a week later.

"How about signing that petition for the stone road, Josh?" the petition carrier asked.

"Can't do it; don't want a stone road," replied Josh.

"What are your objections to it?" queried the committee disappointedly.

"Waal, yer see it is this way," was the startling rejoinder of Josh. "Them mules of mine haint never had any shoes on. They don't need 'em in ther sand, but if a stone road is built it will be too durned hard on their feet, an' I'll hev ter go ter ther expense of hevving 'em shod."

That settled the argument. The macadamizing of the road was temporarily hung up, and for a while Josh's mules were not compelled to visit the blacksmith's shop, though the same freedom from calling did not also result where the automobilist and the repairer were the high contracting parties.

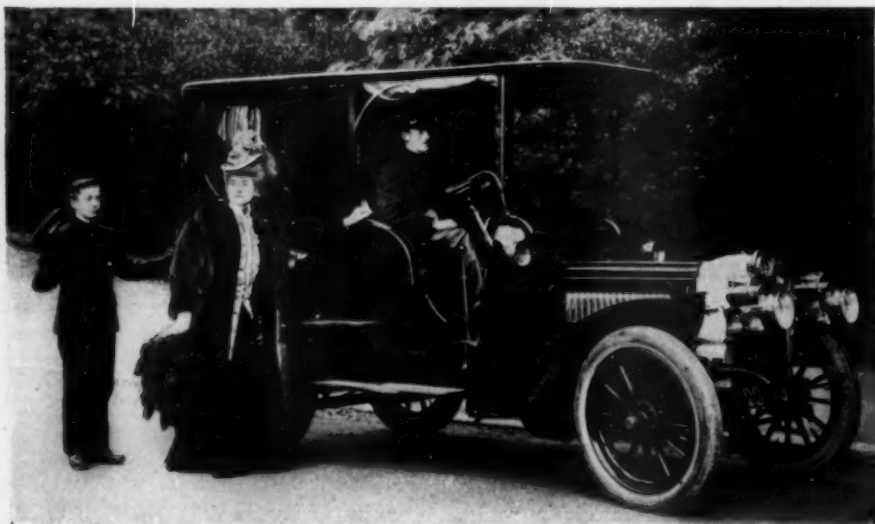
Trying for Originality

Many automobile manufacturers have the laudable ambition to make their advertising "stick up" above the rest by adopting a style of writing which will attract attention. This implies that their writing shall be a little bit different from that of other advertisers. But this policy often leads to absurdities. The best style is that used every day by common

The illustration shows one of the highest grade automobile productions of Great Britain, another member of the famous Daimler family, having historical and structural relations with the German Mercedes and its Yankee counterpart, the American Mercedes. Importations from England to the United States have never assumed anything like the popularity and extent that have been reached by the automobile importations from Continental Europe, but the different models of this line mark a long step in a new direction.

Probably few noticed that the English Daimler was one of the small number of cars displayed at both the Garden and Armory Shows in New York last month. 28-36 H. P. touring cars, 28-36 H. P. limousine and a chassis of 30-40 H. P. are carried regularly in stock, with special designs and equipments to be had on individual order. All these cars are made in Coventry, England, represented in the United States and Mexico by the English Daimler Co., the Metropolitan District agents for which are the Decauville Automobile Co., New York.

Prices of the two complete cars are about on a par with corresponding types and models of the famous Continental workshops, with whom they compete in advanced construction, in style and service. Quotations on either of these or the 30-40 H. P. chassis on application to the general American agents, or their sub-agents in the Metropolitan District, the Decauville Auto. Co.



THE ENGLISH DAIMLER "AT MY LADY'S SERVICE"



A BIG DE DIETRICH IN ATTRACTIVE SURROUNDINGS

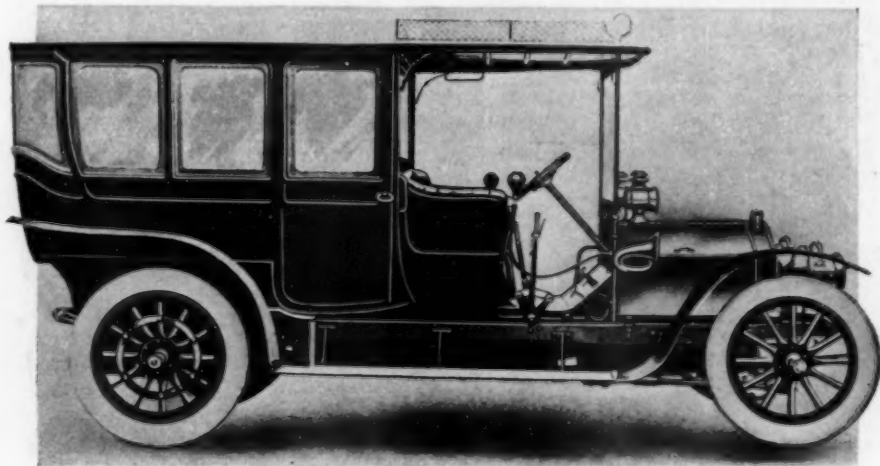
This is one of the high-class, long-established French firms whose product covers a very wide range of power and price. As an example, the 1906 line consists of separate models in 12, 15, 20, 30, 40 and 70 H. P., from which, apparently, any reasonable choice might be suited, except perhaps for a beach record-breaker or cup racer. Prices naturally follow in some proportion, being regularly from \$5,000 to \$12,000, which allows something for quality after the incoming duty has been paid.

The model shown herewith is the latest 40 H. P. car, of which a limited number have been secured for the American market by the De Dietrich Import Co., New York. All 1906 patterns have change speed gear in a quadrant; pressed steel frames; metal clutch running in oil, and all the detailed improvements incorporated in the De Dietrich which won the last Coupe Pyrenees, one of the classic European automobile events. Closed and open bodies, to seat five to seven people are made, with finish and equipment suited to the taste and purse of the buyer.

With a record unexcelled in the commercial history of America for initiative, consistent progress and final success, the great Westinghouse interests have, like many other big concerns, turned their forces and energies toward automobile manufacture. The first visible result of this is the establishment in Havre, France, of a factory turning out motor cars under the familiar American name. Of itself this marks a new departure in the automobile business.

At the recent Armory show in New York a beautifully finished 30 H. P. chassis was displayed, and attracted serious attention. The mechanical features involved, while not of startling novelty and along the lines of established practice, are carried out with the greatest skill, with here and there a decided touch of originality. The water-cooling of the brakes and the carburetor at least are typical "Westinghouse ideas."

In the selection of metals entering into the construction of this line, the widest possible range has been given to a choice, each vital part of the mechanism being made from such steel alloys as seemed best fitted to the particular work in hand, without reference to initial cost. The chassis is sold for 25,000 francs f. o. b. at Havre. It is altogether probable that the progress of this firm, especially considering the special plans upon which they are working, will be watched with increasing interest on both sides of the Atlantic.



THE WESTINGHOUSE 30 H. P.

people, because it is best understood, and a clear understanding is one of the principal points in making advertisements of automobiles of value either to the man who pays for them or the man who reads them.

Starting and Stopping

It should be the aim of every driver to invariably start and stop a car without shock, to glide smoothly and imperceptibly from one speed to another, and to accelerate uniformly. In other words, the car should be absolutely within his control at all times. The elimination of those spasmodic moments which marked the running of nearly all gasoline machines a year or two ago and is noticeable in certain ones to-day, is, and has been not so much a matter of im-

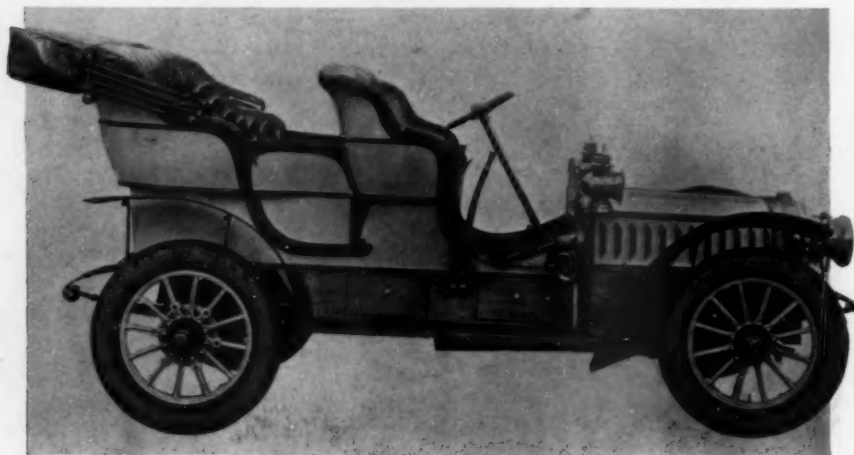
provement in the design as in the dexterity of their handling. The skilled driver will take a three or four-year-old car and handle it as smoothly as a steamer, a thing at one time considered to be impossible. But in order to do this, conditions must be just to his liking, for few men possess the adaptability which will enable them to run any car really well. The driver must know just how far the pedal must be depressed before the clutch will release, and how far it must be raised before it will take hold sufficiently to start the car; he must know how strongly the motor is pulling and how readily it will accelerate, and just how the change gears are working, how readily they mesh, how much lost motion there is in the linkage, and even how easily the lever may be

A powerful and speedy touring model, built on proven and accepted lines by the Austin Automobile Co., Grand Rapids, Mich., one of the newer accessions to the motor car industry. This concern will build for 1906 a limited number of high grade models, some of which have been secured for sale in the Metropolitan District. Among the specifications are:

Wood body, white-and-tan finish; will carry five persons. Four-cylinder vertical, water-cooled motor developing 60 H. P. Transmission selective type sliding gears, giving four speeds forward and reverse. Propeller shaft drive; high tension magneto ignition on one set of plugs; batteries and coil on another set. Gasoline capacity 18 gallons, sufficient for all ordinary touring purposes. Angle steel frame; weight of car, 2,800 lbs. Price, \$4,500; further particulars on application to the manufacturers, mentioning *THE AUTOMOBILE MAGAZINE*.

At New York during Show week this concern had on exhibition three different bodies—jump-seat runabout, touring car and limousine; each on the same 60 H. P. chassis. The runabout had two individual front seats, the space beneath being used for storage, and a folding rear seat with adjustable bronze arms, accommodating two persons. The finish was in olive brown with black mouldings and gold stripe. The touring car was finished in white with olive brown mouldings, and carried a Victoria top.

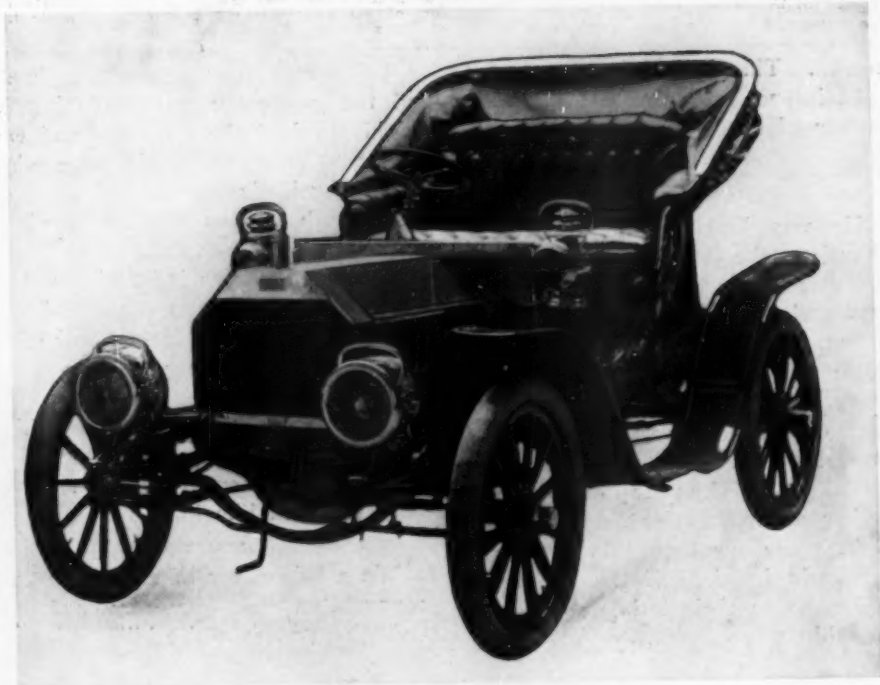
The limousine was finished in olive brown, black and gold. One peculiarity of all these cars was the use of the space immediately under the body and over the running board for storage. This space was filled in with mahogany, with two drawers on each side for tools, batteries and the side curtains. The entire exhibit attracted much favorable attention.



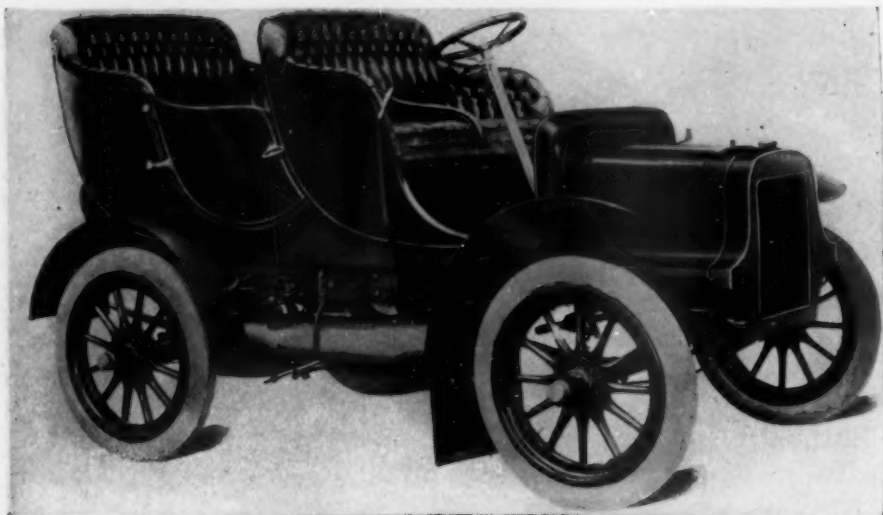
THE 1906 AUSTIN TOURING CAR



FRAYER-MILLER



NAPIER



CADILLAC MODEL "M," LIGHT TOURING CAR

For the season of 1906 an unusually extensive line of cars have been placed on the market by the Cadillac Motor Car Co., of Detroit, Mich., no less than ten models being included in the list. Five of these are equipped with the well-known Cadillac single-cylinder 10 H. P. horizontal motor, viz.: two-passenger runabout, small touring car, light delivery wagon, folding tonneau car and coupe. The remaining five consist of four-cylinder cars of the usual touring types, adapted to the requirements of different classes of patrons.

The cut shows Model "M," a light touring car exceedingly reasonable in price and well adapted for many uses to which those of double or triple cost are frequently put. The specifications include many features, of which a few are given herewith: Single cylinder, 10 H. P. gasoline motor, water-cooled. Two speed planetary transmission; pressed steel frame; tubular radiator; jump spark ignition.

Double brake acting on differential drums applied by foot lever; low speed control by foot lever; high speed and reverse control by hand lever; rack and pinion steering gear controlled by wheel. Three spring suspension; mechanical force-feed lubricator; automatic elastic stop diaphragm carbureter. Double side entrance tonneau body; price, \$950. Particulars of the other new models on application to the manufacturers, or any Cadillac agency in the United States or abroad.

moved. This is largely a matter of acquaintance with the machine and a matter of experience.

His One Failing

He was looking for his fifteenth chauffeur, the fourteenth having gone the way of all his thirteen predecessors and been discharged for general incompetency and carelessness. Among those who had answered his advertisement for a competent, careful man was one who referred to a well known citizen who the applicant asserted knew him intimately. The seeker after the right man for the right place went to this prominent man and inquired if the applicant's claims as to their intimate acquaintanceship was correct.

The seeker after a chauffeur thanked the gentleman who had thus so highly praised the applicant and was about to pass out of his office when the enthusiastic endorser of Jim said as though it was the result of an afterthought:

"I don't know as it makes any difference, but perhaps I should tell you he's worse than a mad bull when he's drunk."

"Yes," said the man, "I know Jim well. I went to college with him. He is clever, a born mechanic, fearless and a gentleman at heart. I am sure you will like him."

We are in favor of an elastic currency that can be stretched far enough to cover a tire bill.

For Scientific Car Testing

By Peter Foley

FOLLOWING along the lines of its world-famous locomotive testing plant, Purdue University has now installed at La Fayette, Ind., the first scientifically designed testing apparatus which has yet been introduced at a seat of learning. The design of the plant has been worked out under the general direction of W. F. M. Goss, dean of the Schools of Engineering, assisted by Professors J. R. McColl and W. O. Teague, and follows lines which are similar to those of Purdue's locomotive testing plant.

The new test constitutes a mechanism upon which an automobile of any type, whether steam, electric or gasoline driven, may be mounted and operated. When thus operated, the power delivered and the efficiency which marks the action of the machine may be determined.

A plan and elevation of the plant are set forth by Figs. 1 and 2. By these it will be seen that an automobile mounted for testing has its driv-



FIG. 4



FIG. 3

ing wheels carried by the supporting wheels of the plant. These wheels are upon an axle which revolves in fixed bearings. Thus mounted, the automobile is held in its desired position by a connection with a traction dynamometer, which, in Fig. 2, appears at the rear of the machine. A friction brake on the axle of the supporting wheels absorbs the energy delivered by the machine. A motor driven pressure blower delivers air through adjustable piping for cooling the radiators of steam and gasoline machines, and a motor driven exhaustor takes air from a point near the exhaust of the machine, thereby freeing the laboratory of obnoxious gases.

Concerning the theory of action, a glance at Fig. 2 will make clear the fact that if the supporting wheels were blocked so that they could not turn,

the automobile would, if started, tend to move forward with its full tractive power, even to the extent of slipping its wheels upon the supporting wheels. Its tendency in this case to move forward will be registered as a pull upon the dynamometer.

If, on the other hand, the supporting

the automobile may be made to pull little or much upon the dynamometer—that is, it may run under a light or a heavy load, as may be desired. In all cases the energy delivered by the automobile is the product of the pull exerted at the draw-bar, into the distance passed over by the tread of the driving wheel.

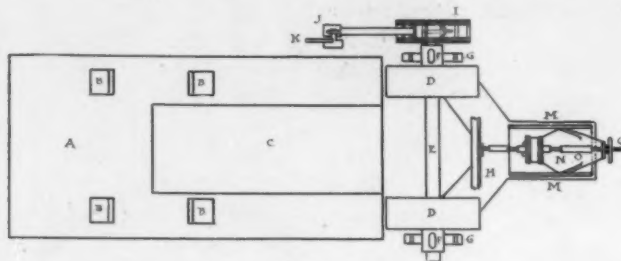


FIG. 1.

wheels are frictionless, then the turning of the wheels of the automobile through the action of its machinery will not result in any pull upon the dynamometer, for if frictionless, the supporting wheel can offer no reaction for such a pull. The supporting wheels are in fact neither blocked nor frictionless, but the design is to have them turn against the

Thus, the horse power delivered is equal to the pull upon the dynamometer in pounds, multiplied by the space passed over in one minute by the automobile driving wheel, divided by 33,000. The space passed over is most conveniently found by determining the number of revolutions of the supporting wheel, since the latter is of fixed diameter;

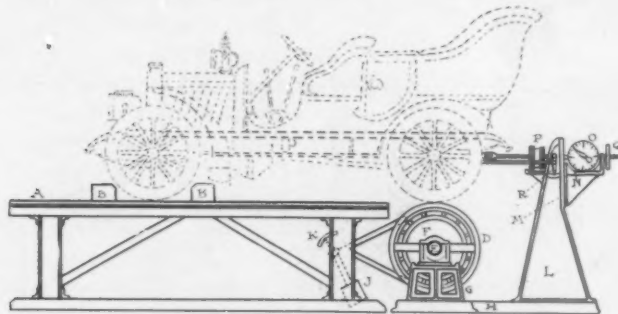


FIG. 2.

resistance, the value of which may be varied at will.

The arrangement is such that whatever this resistance may be, it appears as a stress upon the draw-bar. The resistance is regulated by means of a friction brake, to which reference has already been made. By its adjustment

that is, the determination is based upon the length of the path traveled, rather than by the revolutions of the driver.

Fig. 3 is a photograph of the plant with automobile removed, looking toward the dynamometer. Fig. 4 is a partial view of the opposite end showing the traction dynamometer, and Fig.

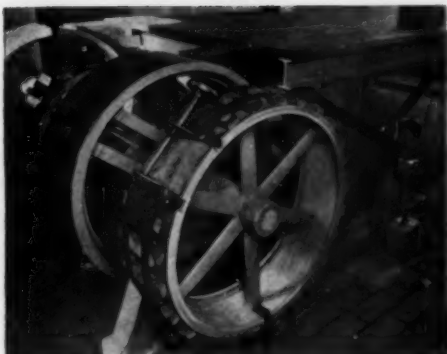


FIG. 5.

5 shows the supporting wheels and friction brake.

While the plant will lend itself to studies of a highly refined character, it is proposed during the present winter to determine the output of power under various conditions of running of a considerable number of typical machines.

Using Exhaust to Brake With

The sounding of a car's horn or whistle by means of the exhaust has come to be a commonplace. Warming the feet of the operator and the inside of the inclosed body by the same means is another rather back-numbered suggestion which constant

repetition does not seem to have resulted in its being taken seriously. But now a patent has been granted in England on a device patterned after the usual air brake cylinder to utilize this "do all work" in braking the car. The idea of the new device is to pass the entire volume of the exhaust into a cylinder, allowing it to escape through another opening placed in front of the piston. Ordinarily the gas simply passes through, but by means of a valve placed in the latter opening the escape is shut off and the constantly increasing compression of the incoming exploded charges pushes the piston back and applies the brake through suitable connections. When desired to release the brake, the valve is opened and the piston drawn back to normal by means of springs. Considering the great efficiency of the internal expanding and band brakes now applied, which are sufficient to bring a car to a stop much quicker than is good for the tires, or any other part of the machine for that matter, it is to be feared that this British idea is one use of the exhaust from which no great possibilities are to be expected.

Learning to Change Gears

By James E. Dunlop

TO the beginner, gear changing is a ticklish operation. He can teach himself in private if he will block up the rear axle so that the tires are at least two inches from the ground level, and wedge the front wheels at front and back with substantial wedges or planks. Then all he has to do is to start up the engine, sit at the steering wheel seat, depress the clutch pedal slightly, and gently work the speed lever in an endeavor to bring it into the first

speed notch. Probably a grating noise will be heard, and he may fail to get the wheels properly in mesh. Let back the lever to its original position and try again. If the lever goes into the notch, then at once let up the clutch pedal gently, and he will notice the rear wheels will at once begin to revolve. Depress the clutch and they will stop; let it in again and they start.

Practice this, and afterward try to get in the next speed higher, first by

depressing the clutch and at the same instant bring the speed lever into the next higher notch and immediately let the clutch in gently without loss of time. The rear wheels will now re-

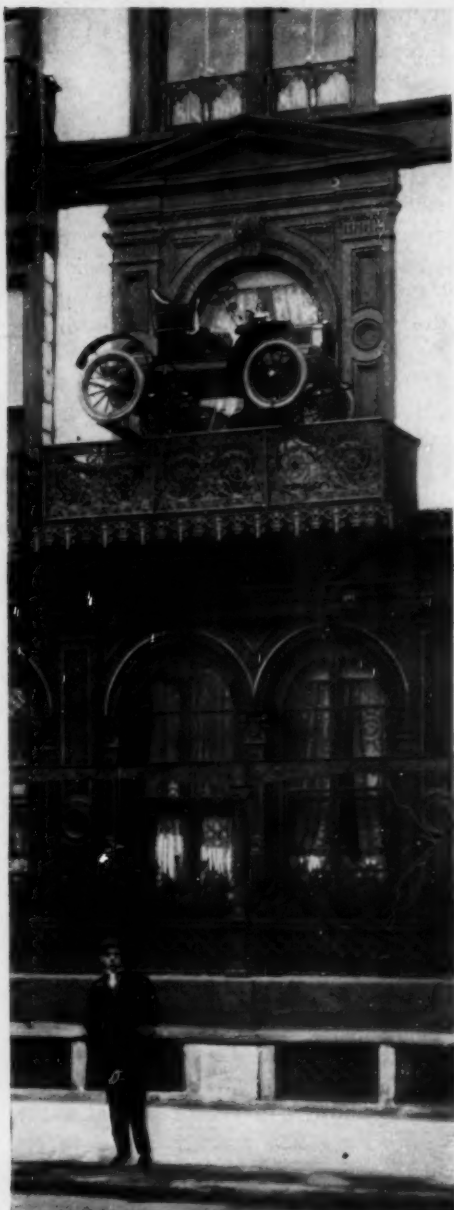
volve faster, and you can then try higher speeds; then practice reducing the gear by doing everything in the same order. While on each of the gears the engine can be run fast or slow with the throttle and spark levers, as before mentioned.

The reverse can then be tried exactly in the same manner, most cars having the reverse and forward speeds actuated by means of one lever. In the exceptions to this rule there is no difficulty in following out the operations to be gone through if the levers are carefully examined and their effect noted when they are operated.

To Clutch Slip or Not To

Drivers differ widely on the advisability of slipping the clutch as a means to accomplish control of the car without jar or jerk. Some drivers never slip the leather, others do so only in starting, while not a few never think of doing anything else. But notwithstanding the fact that slipping lessens the clutch's holding power when subjected to heavy stress and wears it very fast unless it is kept heavily oiled, the leather is easily and cheaply renewed, and its life is much less important than that of chains and gears. Moreover, while the failure of the metallic parts comes without warning from sudden shock, the failure of the leather is by gradual degrees. So that, considering the fact that even a pretty bad case may be remedied, temporarily at least, on the road, it seems best to use the pedal without reserve. If this be done the action of the machine may be made as even as that of a steamer, yet, better than that, a more rapid acceleration is possible.

Any man who thinks he has at last discovered the perfect automobile may live to think again.



The Modern Sign of Hospitality and Plenty—the Maxwell Car over the door of the Café Martin.



The Tale of "Top-the-Hill"

By Richard Ellis

THERE are few citizens in New York State who are more respected than those who came originally from Wales, and fewer still are there from anywhere who, despite their stalwart Americanism, still more stoutly retain the characteristics, language, customs and love of their native land than these same Welsh. The following is the story of Richard Ellis, "Top-the-Hill," told by himself, of his experience with an automobile:

"Mister Jones, I ben hear they make big tax for good roads, or something, what is it, anyway?"

"'Bill Pen Mochin,' he say 'they make it purpose for this ol' autimobils from Utica, to comin' up an' scarin' farmers' horses.'"

"Goss! Rits folks here hain't no better 'an ol' country if I know. When I'm in Wales, an' meet some ol' lords on a road, I'm have to turnin' 'way out, an' give 'em all the road."

"Nowday, when I'm meet some ol'

rits folks in this ol' autimobil, I'm have to driven' 'way out in paster, or else have ol' mare smass buggy all to pieces."

"Goss! I ben have 'n awful time las' summer. Hain't I tell you 'bout it? Goss! I think everybody hear about that."

"My wife, he ben want his mother come over an' visit; an' he's want me to take ol' mare an' we go over after it. The ol' lady he's livin' on 'nother side Remsen; an' indeed! I hain't want to goin' after him very much, 'cause he's make some bossin' 'roun' the house when he's there, an' I hate to see him come. Yes, indeed! Well, I'm a-hitch up ol' mare, an' we're a-drive over to 'Jack.' Well, it be very nice Sunday, an' my wife he say better we takin' baby, too; I'm say, 'All right,' an' we're go. Ol' mare, he's feelin' pretty good, an' 'tain't takin' long to goin'."

"Well, we git there, an' old lady

he's awful glad for see us, an' so we're stayin' an' ol' lady he's make 'tea bach,' an' then we're start back, so get home time for milkin', ain't it? Well, we're come all right 'till we git mos' to 'Dick Pen Flat;' an' the road, it's be pretty narrow here, it's have big bank upon one side, an' 'nother big bank down on 'nother side.

"Well, when we're comin' to narrow road, I'm hear some ouffin' an' smokin', an' what I'm see, but some darn ol' thing comin' in a-road. I ain't never see this ol' autimobils, an' I guess if somebody won't be with me, I be more scare than ol' mare. Well, ol' mare, he's see it jess so quick anybody, you bet; an' he's commence to stoppin' an' blow his nose.

"The ol' autimobil' is have two mens in, an' they're a-have some ol' black thing over their faces. So farmers won't know who 'tis it, is a-scare his horse, I guess so, an' they're a-have some ol' long mittens on, an' by Goss! they look jess same if they're get ready to swarmin' bees.

"Well, I holler on Ann to take a-baby an' jump out; cause I know ol' mare is goin' make jump in minit. Ann, he's jump out, yess so quick he can, but he's strike on stone an' turn he's ankle, so he's walkin' on one leg for two weeks. But, he's hang on to babv—by Goss. Well, ol' lady he can't jump out' cause he's have rheumatiz all time, an' he too stiff; so he's have to stayin' in waggin.

"Well, I think best thing I can do is try to drivin' ol' mare past, 'cause I can't turnin' roun' then, if I want to. I take out whip an' knock ol' mare on his gack little bit, but Goss! He don't care nothin' for that, jess keep shake his tail an' blow his nose, an' look at that ol' thing.

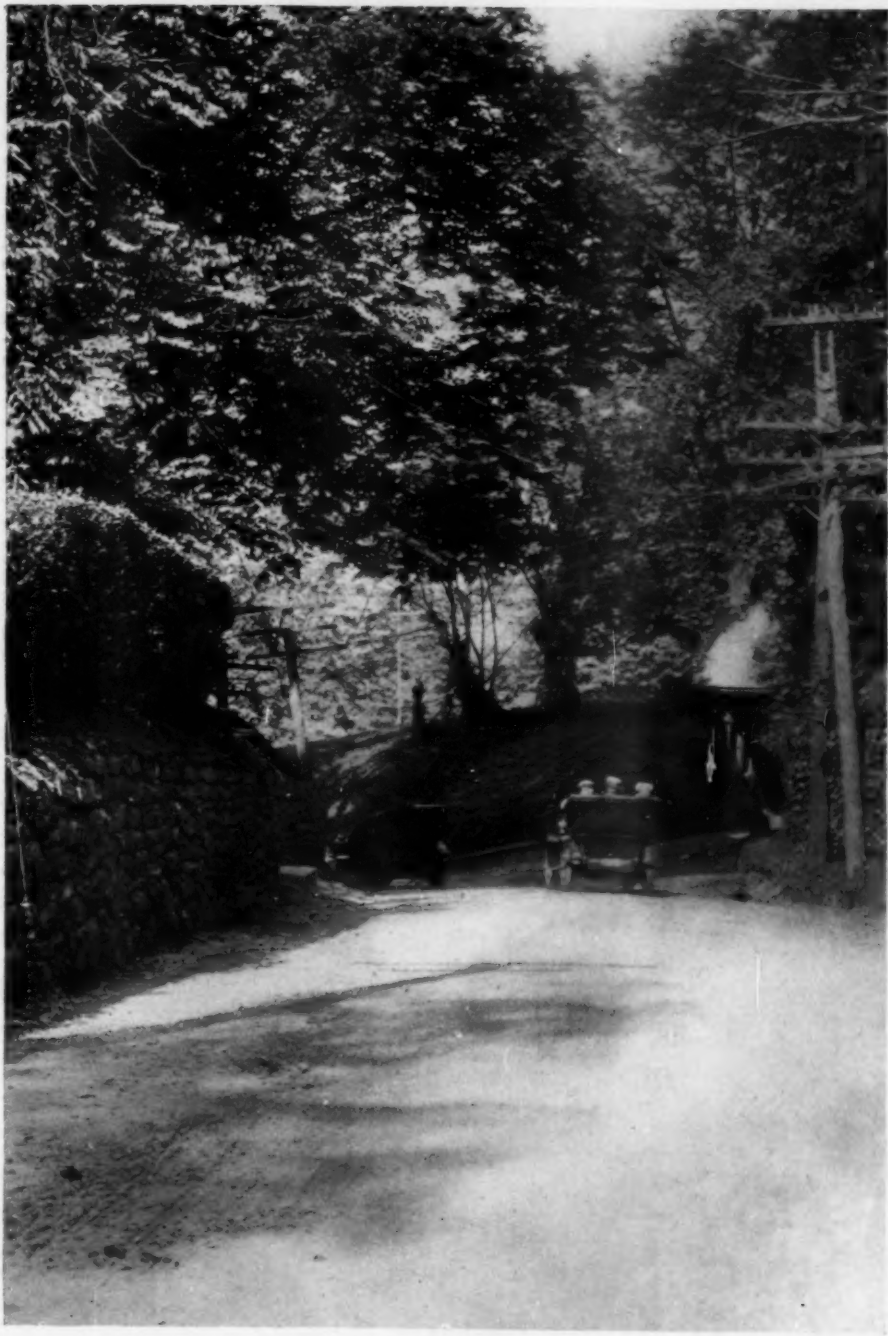
"In a minnit he's make little start. I think, 'By Goss, he's goin' by all

right,' but jess then, that ol' fools that got that ol' black face on, sing some ol' horn they have. By Goss! It sing louder than thras'in' machine horn. Well, sir, Mister Jones, 'fore I knowed nothin', ol' mare stand right up on his back feet; an' then jump jess like some sheeps, an' tip me an' buggy an' ol' lady bottom side up, down the bank, an' all I'm see was the ol' little mare take two front wheels of buggy an' goin' right up bank, an' start 'cross lots for Prospect.

"Well, by Goss! I be so scare I didn't know nothin' 'cause I think sure I'm kill ol' lady, an' I'd ruther anybody else kill it than me, 'cause Ann say sure I do it purpose. Ain't it? Well, I look roun', an' there is ol' lady with his head stick right in mud; an' kickin' jess like some hay spreader. Ann, he's standin' on bank an' hollerin' an' cryin', an' baby he's laughing for see his grandma kick. In 'bout half minute, that ol' fools jump out of autimobil, an' come running up.

"They're comin' right up to where Ann is stoodin' in the road, an' they jess goin' say they very sorry, when a-baby is seein' that ol' black face, an' he's goin' in fits right there, an' by Goss, I think if he gone dead sure. Ann ben awful scare before; an' when he think baby gone dead, he make some faintin' an' drop poor baby right on his head in a-road; an' he bump his head so doctor say he ain't know if he ever git over it so he know nothin'.

"Well, maybe he be jus' same if he didn't bump his head, 'cause he look jess like his mother; an' I think by Goss, he was goin' be jess like him too. Well, we're a-throw water on Ann, an' a-baby, an' wake 'em up, an' then pull ol' lady out of mud.



IN A LEAFY LANE IN NEW JERSEY

Goss! Ol' lady was mad to me, an' he hain't 'fraid to tell me, neither. Goss! He call me every name he can think.

"Well, then ol' fellows tell us all to git in them ol' autimobil', so we all git in, but ol' lady; an' he's so mad he won't go home with us untal; but start an' walk clean back home. Well, that ol' thing is take us home quick, a'nawful. He's ride good deal easier 'an Welsh waggin, an' it's goin' three times so fast ol' mare can go, less he be run away, an' then I guess if cars can't catch it.

"Well, the ol' little mare is get home first, and he's go right in gardin' an' eat up every cabbage and turnip plant I'm a-have. An' then he's roll in onion bed; an' when he hear that ol' autimobil comin' again, he start an' run all round' gardin,' an' smass everything all to pieces. Well, it be five weeks before Ann git over his scare, an' poor baby don't know nothin' yet. Ol' lady, he's feel all right, jess mad to me, that's all; say I let ol' mare goin' purpose to kill him. Ol' mare hain't good for nothin'. He's all time think he see them ol' autimobil', an' want to run away.

"Goss! 'Tain't fit, Mr. Jones, for let them ol' things run on road an' scare farmers' horses jess for sake make good times for some ol' rits folks. Farmers' wife can't drive on road 'tall now most, for fear meet that ol' things. Better farmers git to-gether and make law for stop run them there darn thing on a road. Ain't it? Yes, by goss!"

One Cause of Engine Trouble

Not as infrequently as most of us would like to have it there comes a gradual decrease in the amount of power developed by the engine, which, in spite of everything known to those who are best versed in motor lore, cannot be made to improve. Looking for the cause of all the trouble quickly develops into what is literally a hunt for the needle in the haystack, since the cause has in more than one instance been discovered in something like the plugging of the air hole in the tank stopper. This is a pretty small hole, easily plugged up, and when this occurs with the stopper snugly screwed down the use of a very small amount of fuel causes a vacuum, and the atmospheric pressure at the carburetor end tends to drive the fuel away from it instead of allowing it to flow in that direction. The result is to diminish the spray and in time to cause the flow to cease altogether if the deterring influences are not promptly eliminated by opening up the clogged orifices which are responsible for it all.

No Tags or Taxes on Wilhelm

For fear, no doubt, of being thrown into prison for lese-majesty, those responsible for tagging and incidentally taxing, all automobiles owned in Germany have not dared to decorate the car of the Emperor with a tag, hence the Imperial vehicle is the only one in Germany which is both tax and tag free. Verily, there is something in being a Kaiser after all!





Valsavoia

By Benedetto Ricci



THE journey from Palermo to Girgenti is one of the most beautiful rides in Sicily, and I am almost tempted to say of the world besides. For miles the road runs beside long forests of dark green trees lighted by red and yellow lanterns of lemons and oranges.

And it is as much a feast for the mind as for the eyes, this fabulous, mythological country of Virgil and Ovid, in the crevices of whose mountains Vulcan forged his thunderbolts; a land where the gods carried away their goddesses and where giants, concealed in grottoes, lay in wait for strangers whom they might devour; a country where brigands, worthy of the name, still live.

"The truth is," said my companion, an engineer whose acquaintance I had made by accident only a few days before and who in availing himself of a seat in my car was in return therefor acting as my guide, mentor, interpreter and friend on this tour, when I had questioned him on the actual existence of the reputed brigands of Sicily, "the truth is that there are malefactors here as in every other country. Misery is terrible in Sicily; here as elsewhere it is a bad counsellor. There are plenty of poor devils who will not stop at anything to get hold of a little money. But these are——"

"Bandits?"

"If you choose to call them so; but isolated bandits. They do not work together, nor are there any longer the redoubtable chiefs of former times."

"Nevertheless, at Palermo," I replied, "I heard a great deal of a certain Valsavoia——"

"It is not the same thing," said my companion. "Besides, what you heard of was the Mafia."

"The two are not to be confounded. The people of the Mafia are those who place no confidence in our judges and consequently become their own lawmakers. It is justice made more just, more speedy."

"Every man, whatever his situation, may have in his life an injustice or an insult which he burns to revenge. Certain men are so constituted that they are obliged to satisfy their vengeance immediately. This depends on the temperament, the climate, the race and the blood."

"Now, supposing the man who has taken his revenge is suspected, accused and arrested, he will be glad indeed, will he not, to find a witness who will testify before the magistrates that at the hour of the crime, the accused criminal was somewhere else?"

"Accordingly, service for service. Sooner or later the murderer in his turn will furnish an alibi for the man who formerly helped him. And as these people who thus aid each other belong to all classes, you can easily understand that the foundations of the Mafia are laid in the very heart of society, which is the reason that

nothing has ever been able to destroy the association.

"All the stories which you may have heard at Palermo of private revenge, kidnappings and captures in the mountains, are merely instances of the Mafia. But the foreigner has nothing to fear, although, of course, I realize that the Mafia is made to take the blame of certain outrages committed by the isolated bandits of whom I spoke just now. It is inevitable that such should be the case."

I listened with deep interest, and as my companion paused I asked eagerly:

"But did not this Valsavoia kill a foreigner not long ago, a Danish gentleman, the Baron de Sehrdrupp?"

"Yes, I know it," he admitted. "But the Baron's pocketbook was found untouched, which proves conclusively that the murderer did not kill to rob, but that he acted, in this instance again, for private vengeance."

"Does any one know who this Valsavoia is?" I persisted. "Some said that he is a brigand by profession and others that he is an ex-official who has been the victim of much injustice."

"I have heard," and my companion spoke as if scoring each word, "I have heard that he was an inhabitant of Caltagirone, and that he suddenly disappeared from there about two years ago, after serious domestic troubles. What others have told me on the subject would suit this hypothesis very well."

"It is a long story, a story full of brigands, as they say in your country, and one that would not interest you. What? Certainly, if you really care about it."

"Armando Nitopi, the man who disappeared, lived in a pretty little villa

between Caltagirone and San Michele di Ganzarria. He was about 40 years old, kind hearted, held in much esteem by his neighbors and comfortably wealthy.

"He had been married for ten years, a marriage of love, for his wife, a young girl of Lentini, had brought him no dowry but her beauty. They had no children.

"Signora Nitopi had two brothers named—wait, what were their names?—as, yes, Filippo and Vincenzo. They were bachelors and lived a free and easy life at Catano without working at any particular business. It was said that they acted as guides for tourists who wished to ascend Etna, during the summer season.

"It happened thus that two years ago they were attached to a rich foreigner who came through the country riding an automobile almost twice as big as this one of yours. The brothers acted as guides for the tourist whose money they were expert in spending. All of Catano was known to them, every haunt where a foreigner might be induced to scatter gold freely; they journeyed together in that big automobile.

"One evening when they were agreeably employed in rushing around in the car the man whom they were with demanded to be presented to the young woman he had seen with them on the Piazza Stesicoro. The two guides refused. The woman was a relative—was, in fact, their sister, who had come with Armando to make some purchases in Catano.

"The stranger did not insist. He continued to ride everywhere with the two men, playing heavily and inducing them to play also. One night Filippo and Vincenzo lost, on their promise to pay several thousand lire. The only trouble was that they had

absolutely no money with which to pay.

"It was useless to appeal to their brother-in-law. He had always treated them coldly, and unable to refuse to allow them to come to the house, he had nevertheless not troubled to conceal his pleasure when they left.

"The two brothers would then have been hopelessly lost if their employer and fellow gambler had not placed his purse at their disposal. There was only one condition. They must present him to their pretty relation whom they had talked with that day on the Piazza Stesicoro.

"Filippo and Vincenzo accepted the money and the condition. A week later a party was arranged for a trip in the big automobile, and the guests included Armando Nitopi and his wife.

"After that, it was not difficult to bring about meetings between the foreigner and the bewitching Signora. The latter, however, remained indifferent.

"The stranger was not troubled. With plenty of patience and money, he was confident of success. There was also another method which is employed in such circumstances—to prove to the wife that her husband is not worthy of her lover. The stranger made use of this.

"There were two maids at Armando's villa, one, Carlina, who was devoted to Filippo, and the other, Lodovica, a slave of her master. Naturally, it was the former whom the stranger made use of, aided by the two brothers, who continued to draw deeply from his purse.

"The plot was to prove that Armando was carrying on a voluminous correspondence with a woman at Catano. Carlina was therefore instructed to write, during two weeks, letters

which were dictated to her, and mailed from Catano, when it was her duty to see that they came beneath the Signora's notice.

"But Carlina could not always be sure of taking the letters from the postman when he brought them, and what would happen if the other maid should take the mail and give it directly to her master!

"Carlina alone had intelligence enough to foresee this contingency. At any price, Lodovica must be taken into their confidence and made to aid them.

"Accordingly, without warning her companions, she told Lodovica. But the latter indignantly refused to have anything to do with the plot, and even went so far as to say that she would tell the whole story to Armando when he returned that night from Syracuse, where he was spending the day.

"It happened that very day, however, that the foreigner at the end of his patience carried away Armando Nitopi's wife in that big automobile of his, and when the husband returned to the villa he found no one there except Lodovica, who told him everything. The signora had gone away with Carlina.

"The unfortunate husband understood perfectly what had become of his wife. He did not, however, start immediately in search of her. There were doubtless some arrangements to be made first, for it was not until two days later that the villa was closed. It has remained so ever since.

"A week later, signor, a man, evidently a foreigner and an automobilist, who was walking with a woman somewhere near Messina, was suddenly attacked and killed with a knife thrust in his heart by two masked men. The woman was gagged and

carried to a carriage which was waiting close by.

"One of the men took off his mask and examined his victim's pocketbook curiously before they fled in haste. The woman had succeeded in freeing herself and was uttering desperate cries, but when the rescuers came up they could only see the dust of the fast disappearing carriage.

"Near the body, however, they found a mask and the open pocketbook. It was full of bank notes, on one of which was written:

"This man was a scoundrel. His punishment was his just due.

"VALSAVOIA."

"An inquest was made, and it was discovered that the victim was a Danish gentleman, the Baron de Sehrdrupp. He was to have left Sicily with that big car of his the next day, accompanied by the woman. Who this woman was, was never known.

"It was also known later that the Baron had been living for some time at Catano, where he had been seen in company with two brothers. The authorities sought to find these two men, but they had disappeared.

"Several months afterward a guide who was returning from Mount Pelleyrino and who had been in Palermo but a short time, was found with a dagger in his heart and a piece of paper lying near him, which bore the words:

"This man was a scoundrel. His punishment was his just due.

"VALSAVOIA."

"Three weeks later a traveling merchant who had recently set up in business in Trapano was likewise killed in the same manner, and as he had done twice before, Valsavoia signed his deed.

"It seems that no one could ever

find out who these two men really were. The names which they had given were proved to be assumed, but it was impossible to discover their identity. Criminal justice, when it comes in contact with the Mafia, immediately confronts tremendous obstacles, and it is worse than useless to try to find a witness who knows and will tell any of his knowledge.

"But those who told me the story think that these last two victims were Filippo and Vincenzo and that Velsavoia—which is, by the way, the name of the village where they and their sister were born—is no other than Armando Nitopi."

"Is this a true story?" I demanded incredulously, as my companion finished. "How much is fact and how much fable?"

"It is all true, in my opinion," replied he. "It is a perfectly logical explanation of events."

"Then Armando's wife"—

"Was the woman who was carried away from Messina."

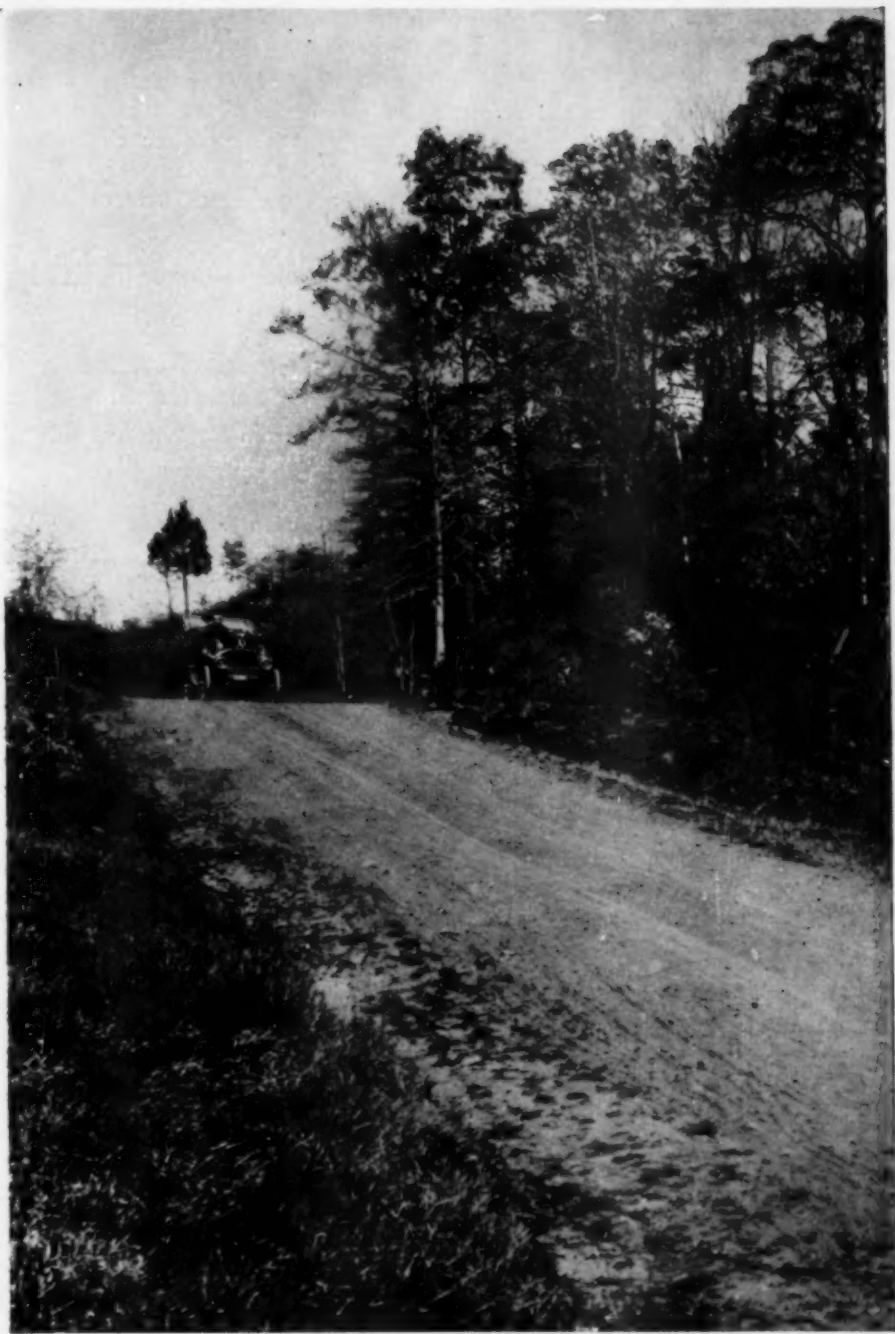
"And where is she now?"

"Probably in one of the numerous caves of which our mountains are full. There she will doubtless be kept until she dies."

"But the servant?"

"Nothing has as yet been heard of her. But, as you see, you must not confound, in Sicily, the people who kill for revenge with the others (whose number is constantly lessening) who kill for money, and I do not believe that this Valsavoia, who has three assassinations and a kidnapping to his account, is one of the famous brigands whom the popular tourist loves to fear. Besides—but I beg your pardon, here we are at Girgenti."

We were, indeed, just entering the town. The engineer, whose conver-



WHERE THE COAST BEGAN

sation had made the time pass so pleasantly on the road, motioned to me that he wished to get out of the car, and when I had slackened the pace thereof he sprang to the street, apparently looking for some one among the crowd which had naturally been attracted by the appearance of an automobile in such a place as Girgenti. As if in reply to his look, a young man of about twenty, who had pressed forward in the crush, lifted his hand in a rapid salute to my companion, and presently I lost sight of both of them in the seething army of porters and facchini, which at once attacked me and proffered their services.

Three days later, as I was leaving Girgenti and waiting at the station for a supply of gasoline which I had ordered sent me, one of the guards there informed me that the night before, a servant girl named Carlina had been kidnapped.

"Doubtless a lover who was in too much of a hurry!" the man explained, smiling.

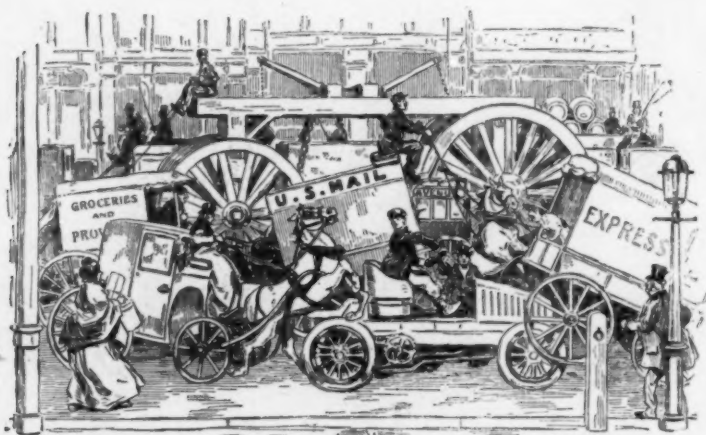
I said nothing. Once on the road

again and alone this time, I began to think deeply, and, recalling the story I had heard, I wondered if this was not another of Valsavoia's moves, for the girl Carlina was the only link missing in the complete chain of revenge, if Valsavoia was, as the stranger had surmised, identical with Armando Nitopi.

I was inclined to think he was right. But, as I reflected further, it struck me that he had shown too intimate a knowledge for a mere outsider, and presently the truth dawned upon me that the man with whom I had ridden from Palermo was no other than—Valsavoia himself!

Need of Horse Sense

Motor cars are said by a daily paper to be having a very detrimental effect upon the temperament of high spirited and well bred horses. It might also be added that they are having the same effect upon the temperaments of the misguided owners of the horses who believe that owning such an animal is synonymous to owning any road any animal ever traveled over.



IN THE "QUIET" STREETS OF NEW YORK



One Hundred Years Ago

By The Antiquarian

AT the beginning of the nineteenth century it was the complaint of Englishmen who had visited the chief cities of Europe that the stuffy, slow-traveling hackney coaches of London were a disgrace to England, and it was urged that an attempt should be made to introduce the cabriolet de place, which had attained great popularity in Paris.

The hackney coach proprietors, fearing that the foreign vehicles would diminish their earnings, endeavored by every means in their power to make the public believe that it would be unpatriotic to permit French customs to be introduced into London.

Nevertheless, in 1805, Mr. Rotch, M.P., obtained licenses for nine cabriolets, of which he and a Mr. Bradshaw were joint proprietors. The licenses stipulated, however, that the cabriolets were not to enter "within the bills of mortality," thus excluding them from plying for hire in, or driv-

ing to, the chief business, pleasure and residential parts of the metropolis.

The cabriolets in 1805 were similar in appearance to the modern gig. Only one passenger could be carried at a time, and usually his enjoyment was marred by his having to sit side by side with the driver, who was invariably dirty and frequently smelled strongly of stale beer.

Owing to the limited area in which Rotch and Bradshaw's cabs were compelled to ply for hire, they were a financial failure, but they had proved that much time could be saved by using them instead of hackney coaches.

The public realized that cabriolets licensed to ply for hire "within the bills of mortality" would be a great convenience, and in 1823 official recognition of this was given by the granting of full licenses to twelve newly built vehicles. These cabrio-

lets were placed on the streets on April 23, 1823, and were described as being "introduced to the public in honor of his Majesty's birthday."

The new vehicles differed in one important respect from their predecessors, the driver having a separate seat, built out between the body of the vehicle and the off-side wheel. This arrangement enabled each cabriolet to carry two passengers instead of one. The hood bore a strong resemblance to a coffin standing on end, and before many months had elapsed the vehicle was known popularly as "the coffin cab."

In rainy weather the driver lowered the fore part of the hood, and if the passenger needed any further protection, there was a curtain he could draw. The fare was 8d a mile, and 4d for every additional half mile or part of half a mile. Luggage was placed on the floor, between the apron and the splashboard.

The new cabriolets—or cabs, as they were soon called by all but pedants—had not been more than a few months on the streets when people began to complain that the speed at which they traveled was a danger to the public. It was very rarely that cabs exceeded eight miles an hour, but the fact that it was easy for them to pass the lumbering two-horsed hackney coaches and luggage-laden

short-stage coaches was considered to be conclusive proof that their speed was dangerous. It is true that cab accidents were numerous, but in the majority of cases the drivers and passengers were the only sufferers.

The cabmen were exceedingly proud of being able to pass every public vehicle—with the exception of the stage coach—and jeered at the drivers whom they overtook on the road. Carmen and hackney and short-stage coachmen retaliated by keeping to the middle of the road when they saw or heard a cab approaching, and when a cabman, trying to pass, caught his wheel against a street post and upset his vehicle, they considered it to be a matter calling for loud laughter.

Timid people never ventured to ride in a cab, but remained patrons and admirers of the hackney coaches, which, in spite of their many faults, were the safest vehicles that ever plied for hire in London. The outcry against cabs soon subsided, and the proprietors, men of good social position, were delighted to find that they had a very profitable business.

Just Their Luck

Full many a racing car is made to run
Against some hard, unyielding wall
ker chuck!
And smash and hardly cripple any one—
Some reckless scorchers have such
beastily luck!





The Yawp of the Yeller

By Thomas Canary.

WHEN your real yellow yellow newspaper man sets himself down to do himself proud, look out. Unhampered by any regard for facts or other such like restraining influences, he has but one object in view—to be blood-curdling; and, the truth to tell, he usually succeeds. In its persistent attempts to accomplish the impossible, i. e., to injure the popularity of the automobile, the *New York World* turned one of its star writers loose on the “deadly automobile,” and this is the way the gentleman tells you exactly what happens even to your very feelings when a fatal accident takes place. You will see from the graphicness of the description which follows that the writer of it must have been passed out by “the auto-death” route and then wrote the whole thing up from the other side. Here is the worldly way of telling the story:

“When De Quincey wrote his famous ‘Vision of Sudden Death,’ he wrote in most vivid style of the thoughts that leap into one’s mind when death is close at hand—death in this case, by being killed by an oncoming stage coach. How labored and slow it must seem—this death at twelve miles an hour and a chance to think, when the death-dealing auto is dashing on at sixty, seventy, perhaps

eighty miles an hour. The twinkling of an eye, a swerve, a crash—death!

“And the transition, the suddenness of it all.

“One moment a merry party, filled with hope, and life, and animation. The on-speeding automobile, the exultation of speed, the glow of health and strength, the care-free passengers who have everything that money can buy. Perhaps at the end a merry house party or a lively supper or a formal dance awaits the party. Perhaps they are sweeping homeward to a house, happy families await them.

“A rut in the road, an exploding tire, the slip of a bolt, a sudden turn, an unsteady hand, an inexperienced eye—any trifle—

“It is over!

“On the ground, tossed about like corks, lie the bruised and broken bodies. Here a fractured skull, there a crushed and broken limb. Here merciful unconsciousness; there exquisite agony. Death has been the portion of some; injury the lot of others. The thing that did it all lies somewhere about, a crushed, battered mass of steel and brass, powerless to do harm again. Such is the auto-death.

“It comes without warning always. It comes when spirits are lightest and life

the brightest. It comes to the happiest and gayest. It comes just when death seems furthest off, when health and strength rule highest. It demands the most from those who have the most to give.

"It there a remedy?

"For instance, there is speed regulation. Unquestionably high speed causes many of the auto deaths. Tires that run true at twenty miles burst at the pressure of sixty. Axles that are rigid at low gears snap when the race is on. Stones that mean only jolt at low speed make a somersaulting automobile when it is going forty miles an hour. Ruts that would only stop a machine going slowly upset it when it is going fast. Brakes that stop a machine running moderately won't work in time to save a dash into a tree or telegraph pole when the machine is eating up the road at a fifty-mile clip.

"But all the speed regulations in the world won't keep gasoline from exploding. Speed regulations won't stop trains from running down the silent machines that essay to cross the tracks ahead of

the oncoming locomotives. Speed regulations won't stay the unsteady hand that turns the steering wheel the wrong way and makes a collision out of what had been meant to be perfect safety. Speed regulations won't change the hand that pulls the wrong lever and backs an automobile off a cliff. Speed regulations will not stop steering gears that jam or brakes that fail or wheels that skid or axles that buckle.

"The best built machine in the world, in spite of all law and all regulations, is an instrument of death in the hands of a novice. The best chauffeur in the world can't hold a machine true when a tire snaps off or a wheel breaks. And the best automobile and the best chauffeur are helpless when some one ahead turns the wrong way.

"Prudence and care may save many a life, but as long as autos run and gasoline explodes there will hang over the heads of those that ride this newest peril of latter days—the auto-death."

Can you beat it?

Military Miles and Cost

Some idea may be gained of what the automobile may do when acting as a military aid from the recent report of the British Motor Volunteer Corps. With 159 motor vehicles of all types during the last year the actual time in service averaged slightly over ten days' duty. The daily average distance traveled by each car during its time of service was 75.42 miles, with a total per car of 814.26 miles, while the total distance covered by all cars was 87,941 miles. In addition, 10,330 miles was the total of the motor cycles. Without counting the government capitation grant, the cost of the use of the automobiles was 5 cents per mile, and 1½ cents per mile for the motor cycles.





For Cheaper Fuel

By Terrence Trenholme

LIKE everyone else who has had any acquaintance with the gas engine, I have learned its limitations and its deficiencies. Weighed impartially, these are far less than the engine's capacities and successes, and I have therefore been content to let the minor failures be swallowed up in the major advantages. Friend as I am, however, of the gas engine, I am not so blindly so that I do not recognize the arrival of the time when the great increase in the cost of fuel we now use will cause the gas engine of to-day, unless something is done to or for it, to be an expensive, not a cheap method of generating power. Along what lines this absolutely necessary change must come I have long puzzled without arriving at any, to me, satisfactory decision, but in a recent issue of *The Scientific American* I found an article by S. M. Howell on a rational method of cooling gas-engine cylinders, which has opened up an entirely new line of possibility in this important question of bringing the gas engine back to the original cause of its invention, i. e., a cheap, efficient power generator, easily supplied with fuel. I think you can well afford to lay before the readers of

THE AUTOMOBILE MAGAZINE Mr. Howell's story and the illustration thereof just as they appeared in *The Scientific American*, and I am sending them to you with that idea. (The story here follows.—Ed.)

"It is a matter of common observation in gas-engine practice, that an air-cooled cylinder will develop somewhat more power than could be secured from a water-jacketed motor of equal size, and under otherwise equivalent conditions. In other words, the engine without water cooling is the superior in point of economical performance. This experience agrees perfectly with the well-known simple theory upon which the production of power is dependent in all forms of the internal-combustion motor.

"The gas engine is a heat motor, pure and simple, producing power solely by the development and conservation of a high degree of heat. The working fluid is a mixture of air and certain inflammable gases, and the whole is violently expanded by the instantaneous burning of the contained gas and the intense heat thus generated. It must follow, therefore, that a water jacket or any device which operates to dissipate the heat of

combustion, prior to the moment of the exhaust, will also lower the pressure and curtail the power of the engine in a corresponding degree.

"In the case of the water-jacketed engine, the cylinder walls have a comparatively low temperature, and rapidly abstract heat from the burning charge, thereby reducing the pressure and diminishing the power of the stroke. But the so-called air-cooled engine, having a much higher temperature, will therefore develop a higher pressure, and for a time at least, or until the cylinder becomes excessively hot, will produce more power.

"The amount of heat lost through the walls of a gas-engine cylinder by the use of a water jacket varies with the conditions. A high piston speed and high compression are factors which have a marked effect in reducing this loss; for the reason that in such cases the cylinder is smaller than would otherwise be required to develop the same power. This reduces the extent of water-cooled surface with which the ignited gases are in contact, and also, by reason of the quicker stroke, shortens the time of such contact.

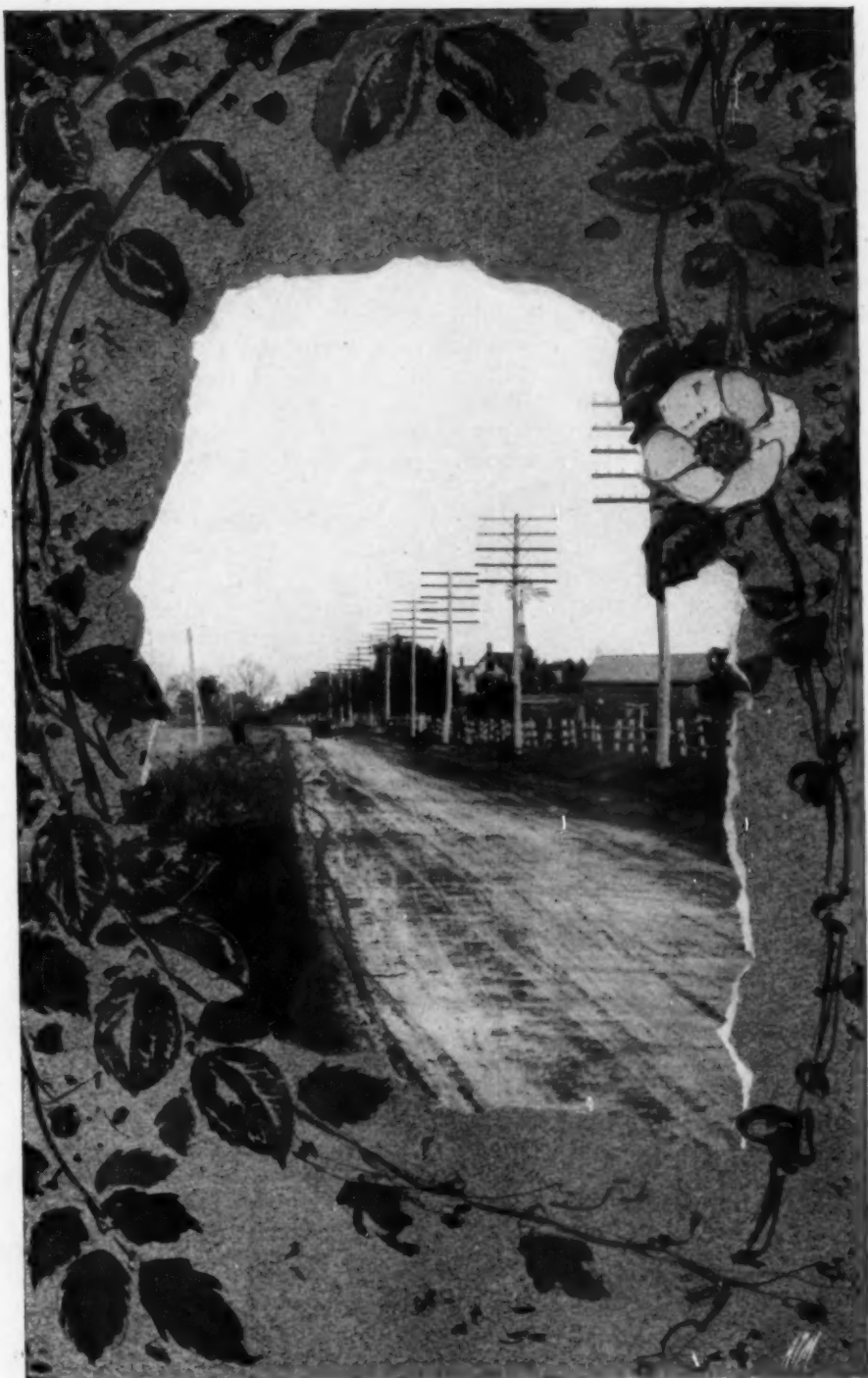
"The amount of heat absorbed by a water jacket may readily be determined in any given case by a simple calorimetric test of the water used, taking note of its volume, and its temperature as it enters and as it leaves the jacket. But I have observed, in making experiments of this kind, that the figured result does not always account for the deficiency which exists in the power of the engine, as compared with the heat which should theoretically be developed, and that too after making fair allowance for all other apparent losses. In explanation of this, it may be urged that the

full temperature and the total amount of heat generated by the complete burning of the fuel, is not, in the case of a gas-engine cylinder, fully developed. The combustion is more or less imperfect by reason of contact with an extended metallic surface at a comparatively low temperature. If this is true, then we have also an indirect loss caused by incomplete combustion, and chargeable to the use of water cooling.

"The hydro-carbon liquids or gases, which are the usual fuel of gas engines, consist essentially of hydrogen and carbon. The hydrogen is readily inflammable, and under ordinary circumstances is capable of but one reaction, resulting in the formation of the vapor of water. The elastic force of this vapor, powerfully compressed within the confines of the cylinder by the heat of combustion, forms a large part of the working fluid by the pressure of which the piston is driven. The trouble would seem to arise from a deficiency in the burning of the carbon element.

"Carbon in burning may form either of two combinations—carbon dioxide or carbon monoxide. The former is always the result under fairly favorable conditions, but in some cases, notably those in which the flame is confined within narrow limits and in close contact with metallic surfaces, the heat is so rapidly withdrawn that the temperature falls, and the process degenerates into incomplete union with the oxygen of the air, and the formation of carbon monoxide, the difference being that the amount of heat liberated by this degenerate reaction is less than one-third that which would result from perfect combustion of the carbon and the formation of carbon dioxide.

"A familiar instance of this defec-



THE VILLAGE HIGHWAY

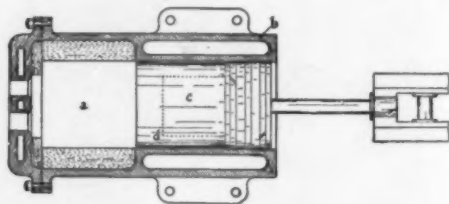
tive form of combustion is seen in the attempt to pass a gas flame through a sheet of gauze or cloth made of fine metallic wires, or to conduct a flame through small metal tubes. In these cases, the cross-sectional area of the passages is very small, and the extent of cold metal comparatively large, with the result that the temperature falls below the kindling point, and the flame is extinguished or reduced to the monoxide reaction described above. That these instances have a parallel in the conditions which exist in gas engine practice, seems probable. It is obvious, however, that such an effect must be more marked in the case of small engines than in those having large cylinders, and could be determined in any case by a careful analysis of the exhaust.

"In regard to other methods of cylinder cooling, little need be said. Aside from the various methods of air cooling, the injection of water directly into the cylinder seems to be the only alternative. But this method, unless very sparingly applied, is worse than the use of an external jacket. It was one of the first cooling systems tried in the early days of the gas engine; and although modern designers sometimes attempt to revive it, it has usually proven unsatisfactory. This is evidently for the reason that the water in direct contact with the burning charge must greatly modify its temperature, while the cylinder walls would be only indirectly affected, and might still be insufficiently cooled.

"Then, too, the introduction of too large an amount of water into the cylinder of a gas engine, resulting of course in the immediate production of a body of steam, antagonizes combustion, and renders the ignition more

difficult, and in the case of a four-cycle engine, has a tendency to destroy the vacuum produced by the retreat of the piston, filling the cylinder with steam on the suction stroke, and thus interfering with the inspiration of the charge. And still it is true that a small quantity of water, if properly regulated, may be injected into the cylinder of an air-cooled motor with much advantage. In this case it moderates the excessive heat of the contact surfaces, and assists lubrication by saponifying the oil and loosening any carbon deposit, which may otherwise adhere to the cylinder walls.

"But after demonstrating the disadvantages of water cooling, the fact still remains that red-hot metal surfaces can not be continuously worked under heavy pressure in air-tight contact. Some means must be adopted whereby the destructive effects of heat on the cylinder and piston may be obviated. Thus it seems that in the present state of the art, the efforts of the gas engine designer are opposed by a conflict of natural conditions, and that he must so construct his engine that durability will be secured at the sacrifice of economy. But let us see if there is not a remedy.



"In the figure which accompanies this article there is shown the high-pressure cylinder and piston of a compound gas engine, built upon a system which has for its object the utilization of the greatest possible amount

of available heat in a cheap liquid fuel, viz., crude or partly refined mineral oil. It may be noticed that this cylinder consists of two parts, viz., the combustion chamber *a*, the internal walls of which are protected from the heat by a lining of refractory material, indicated by the dotted surfaces; *b* is the cylinder proper, wherein the piston and rings work in air-tight contact. This part of the cylinder is water jacketed in the usual manner. The admission and exhaust valves are located in the head of the combustion chamber, this member being also partly jacketed to protect the valves. The piston *c* is the elongated type, that is, of somewhat more than the usual length, and having the rings near the forward or open end, the other end being covered by a thick cap *d*, of the above-mentioned refractory material.

"The elongation or extended part of the piston, with its refractory cap, is slightly smaller than the bore of the combustion chamber lining. This allows the elongated part to reciprocate within the combustion chamber, and to effect the necessary displacement without actual contact. Leakage past the piston is stopped by the rings at the opposite end which works within the cool part of the cylinder proper. The exhaust passes into a second and larger cylinder on the same shaft, where it delivers its remaining power in the well-known manner common to all compound engines. The cycle may be either two or four, but in either case, pure air alone will be admitted on the charging stroke. This air is compressed on the return stroke to a very high degree—300 to 500 pounds per square inch. The oil begins to enter (forced in by a pump) at the commencement of the power stroke, and without the

use of any igniting device whatever, is instantly fired by the heat of compression, maintaining the required pressure throughout the stroke, in the manner of those engines which operate upon the well-known continuous combustion system.

"A gas engine constructed upon these lines would possess the following advantages: It would be perfectly adapted to the use of the cheapest liquid fuel known. The injurious effects of heat upon the working faces of cylinder and piston would be avoided. The losses incident to the use of the water jacket would be totally eliminated. The conflicting requirements encountered in the present methods of design would be obviated. The engine would be as durable as any other, and its thermal efficiency would be the highest possible in a heat motor.

"Concerning the advantage of compounding, it should be observed that the exhaust from an engine operating upon the above system has a very high pressure (100 pounds per square inch), and the gain by this means would therefore be considerable.

"Regarding the character of this proposition for a new gas engine, it is virtually a composition of at least three expired patents, and its value therefore does not consist in the novelty of its elements, but in the peculiarity of their combination. Certain other known devices might also be involved in its final construction, but this would depend upon the mechanical details of the arrangement by which the oil was delivered to the cylinder, rather than on the operative principle of the engine.

"The temperature of the linings and piston cap—owing to the constant inspiration of fresh air through the inlet valve—would never exceed a dull red

heat, and the valves would not become much hotter than is ordinarily the case in any gas engine.

"The drawing shows the piston at the extreme end of its outward stroke, the length of which is, in this case, about equal to the cylinder bore.

"It is not essential the compression pressure should be as high as 500 pounds (mentioned above), as the charge would be self-igniting at a point considerably below this figure."

Cost and Time of Trip to a Star

"Let us suppose an Ormond beach to extend between the earth and the fixed star Centaurus," said the lecturer. "By a consideration of this we can get some idea of the enormous distance that intervenes between Centaurus and us.

"Suppose that I should decide to take an automobile trip on this new aerial line to the fixed star. I ask the maker of the car what it will cost, and he answers:

"The cost is very low, sir. It is only a cent each hundred miles."

"And what, at that rate, will the expense one way be?" I ask.

"It will cost just \$2,750,000,000," he answers.

"I pay and take my seat in the car for which I have paid this small bill for fuel. We set off at a tremendous rate.

"How fast," I ask the chauffeur, "are we going?"

"One hundred and twenty miles an hour, sir," says he, "and it's a through run. There are no stoppages."

"We'll soon be there, then, won't we?" I resume.

"We'll make good time, sir," says he.

"And when will we arrive?"

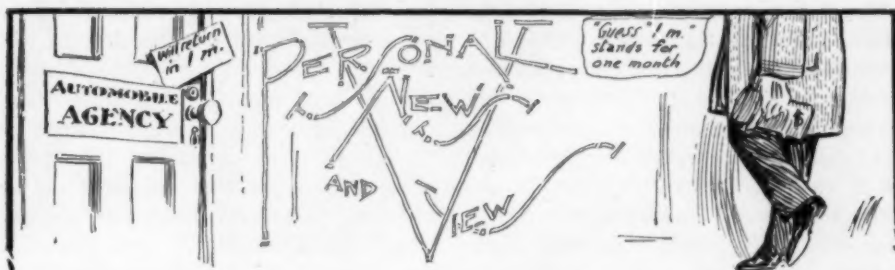
"In just 24,331,500 years."

Dressing and Lubricating

The treatment of a clutch leather is a matter demanding considerable thought. The old rough and ready rule of the road, "kerosene when it is fierce, gasolene when it is too smooth," works out very well and does little or no harm, though in the end castor oil is the best lubricant. In a pinch any old oil will do, but it must be used with discretion. For a slipping leather the smallest possible amount of resin sprinkled on it will prove a most efficient cure, but yet like the oil the resin, too, should be used sparingly. Some drivers who use rather a smooth clutch carry in the tool box a little dust blower, such as is used in the household for distributing the antidote for a certain well known little domestic pest. Finely powdered resin may be used in this and applied very evenly. But ordinarily a liberal washing with gasolene will clean off the oil and yet prevent a second application of the lubricant from settling into the grain properly. On no condition should any of the patent belt dressings or melted rubber be used, as they make the clutch much too fierce and harder to release.

Smoothness from Slipping

A clutch which is frequently slipped soon becomes so smooth that it will not hold under heavy loads, yet an extremely fierce clutch, or even a smooth one which is handled abruptly, quite aside from yanking the passengers unmercifully, brings all sorts of unnecessary strains on the mechanism and wears it out very rapidly. Slipping is bad for the clutch, inasmuch that it tends to destroy its grip, and yet good for the rest of the machine and conducive to the comfort of the passengers.



THERE are deuced sight more poor salesmen put on public exhibition at the automobile shows than there are good ones. The wonder is that with such inferior assistants the manufacturers sell as many cars as they do. To me it can only be explained by the determination of the public to buy automobiles in spite of all the blunders of the salesmen through whom they are condemned to conduct their business with the makers. When you come right down to it, it really is no mystery why good salesmen are rare and poor ones plentiful.

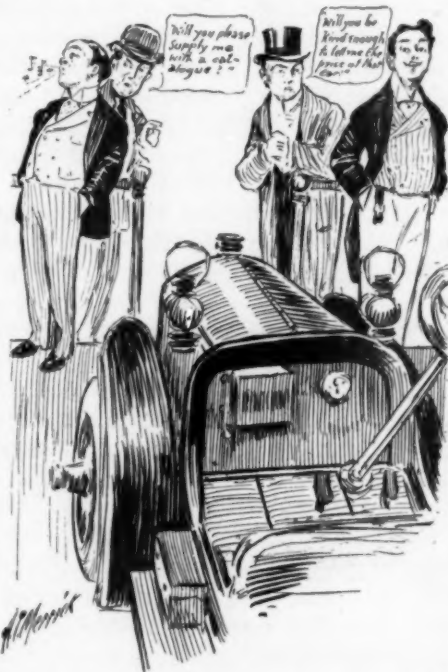
There are three paramount considerations in every interview where there is a desire to effect a sale, and they should never be lost sight of. First, the impression made on the subject—which, if a good one, means half the battle won; if a bad one, the battle practically lost before the first shot; second, the need of quickly, intelligently, and

forcefully exploiting the maker and the car; and, thirdly, knowing the proper moment to grasp the opportunity to close the case and secure the order.

The really great factor, however, that makes for success in the selling of an automobile to-day is hard work, whole-souled, conscientious work, without which results are meager and real success a will-o'-the-wisp. Salesmen should always remember that their capital is time, and that the wasting of it is criminal to themselves and to their employers. Too often it occurs that, having sold a car, they feel elated and say: "Well,

that's a good day's work, and I guess I'll take it easy for the afternoon."

Salesmen should take a hopeful view of automobiling, yet they seem to have a habit of saying "business is rotten" to each other, even when, as a matter of fact, it is good, and thereby discouraging each other. Too



often a similar remark is made to the trade, creating discouragement. The successful salesman ever wears a smile, in success or adversity, and brings to established or prospective trade the cheery word, the glad hand, and the confident manner that begets confidence in his subject. He recognizes the philosophy: "Laugh, and the world laughs with you; weep, and you weep alone."

There are certainly many men in the trade and out of it, too, who have never had a chance to sell cars who have all the necessary qualifications lying dormant. With slight development they would become eminently successful. Besides, there is an exhilaration about the life of a salesman who is ever anxious to outdistance his fellows and make glad the heart of his concern by selling a lot of cars. The man who values his position and likes his work will always be successful, but no man who dislikes it can expect to be a good salesman. There are other reasons why successful salesmen are scarce, but the ones I have given are quite sufficient to prevent the scarcity being regarded as a mystery in any way.



"LIKE master like man," is an old tried and true adage which, while it was invented years and years ago before the automobile was even thought of, still applies with peculiar appropriateness to the chauffeur and the man who employs him. Recently after a peculiarly unfortunate accident wherein a rich man was killed through an accident result-

ing from his chauffeur endeavoring to overtake and pass another fast traveling car on a narrow strip of road, several well meaning but ill advised persons of some social, but no motoring, prominence rushed into print with the demand that a drastic law be at once passed to keep professional chauffeurs from killing their wealthy employers through the chauffeur's utter disregard for his own safety. Never was there a greater *reductio ad absurdum*.

Like master like man fits the case precisely. No matter what drastic laws may be passed against professional motor car drivers, the lessening of the sad results of carelessness or recklessness will not be in any way lessened. Chauffeurs, like all the rest of us who have to labor that we may live, do about what they are hired to do. They are responsible to their employers, and their employers are morally responsible to the public for their acts. It is obvious that what makes motoring dangerous—high speed—is a matter that rests primarily under control of the owner, and it is to him that the State and the community should look for the proper use of his conveyance. It is not for the State to keep his employees in order. If he cannot employ a driver who will obey orders he has no right to employ one who will not do so and then let the public look out for itself. Responsibilities as well as privileges run with the car, and the man who puts it on the road must assume the one when he takes the other. The driver of an automobile is, of course, amenable to the laws as well as any one else. But it is absurd to talk of special laws aimed at him as a means of rendering the roads safe. In most affairs of life the principal is responsible for the acts of his agent. The

rule is a good one to apply to automobilists. A law forfeiting for a year the license of a recklessly driven machine would bring home to owners their share in the evil.

It is worth recalling that the automobile is of such recent origin that the present tariff law, the Dingley act, although enacted in 1897, contains no mention of the motor car. So far as possible, the framers of the revenue law provided for all known commercial articles, but the motor car was slighted. The law does, however, provide that certain articles shall be assessed according to the component material of chief value, and it is under this provision that the customs officers collect duty at the rate of 45 per cent., which is the levy demanded on manufactures of metal. The rubber tires, as well as the engine and other parts of the automobile, come in for their share of duty, with the result that any attempt to import a car is something to be avoided by anyone who values his peace of mind.



DAVID HENNER MORRIS, president of the Automobile Club of America and sole discoverer of the farmer as "the stanchest advocate of the automobile to-day," has now come forward with the proposition "that automobiles should be made to pay for the up-keep of the State roads." To accomplish this Mr. Morris says he "would advocate an automobile tax to be devoted exclusively to it" (the up-keep). I haven't the slightest doubt that every one of

those stanchest advocates of the automobile to-day, ergo, the farmers, are in most hearty accord with President Morris in his new idea that the automobilists should be specifically taxed for the up-keep not only of State roads but county, city, town, rural and village roads as well. In fact, if Mr. Morris' new idea can only be brought to a vote I think he can count with absolute certainty upon the vote of every single "stanchest advocate of the automobile to-day."

Why, Reuben would fairly outdo himself in his anxiety to vote in favor of Mr. Morris' new proposition, but how about the automobilist himself? Do you think he will be quite so favorably inclined toward Mr. Morris' efforts in his behalf? Well, I wot not, and what I know about the opinion of the average automobilist in matters like this I doubt whether even Mr. Morris knows more. Why should the automobilist, already more heavily taxed than any other user of the highways, be further taxed for the up-keep of the highways which he absolutely does not in any way cause to need up-keeping? Which injures highways the most and which is most benefited by their construction and up-keep, the automobilist or the farmer? Even Mr. Morris will admit that the answer to this certainly is not the automobilist, then why should the one who injures the roads the least and benefits the least by their being kept up be the one to specially taxed therefor? Maybe Mr. Morris knows, but I'll be blessed if I think anyone else knows unless perhaps his friend, the farmer, does.

The wonderful growth of auto imports at New York is illustrated by official statistics issued by George W.

Whitehead, the Appraiser of the Port. The Appraiser's figures show that in the calendar year of 1904, 602 machines were brought in, with a value of \$2,209,492, while in the preceding year, 1903, the imports numbered only 375, appraised at \$1,300,000, while the imports of the year 1905 were in excess of 1,050 machines valued at more than \$4,355,000.

The entire wiring of a car should be carefully examined from time to time for signs of wear in the insulation. At certain places the wires are exposed to continual, if slight, friction, which slight though it may be will nevertheless ultimately break through the insulation and establish a short circuit. The timely application of a little insulating tape will often save much trouble in this respect.

MY! my! my! but the demonstrators and other representatives of the manufacturers, and in not a few cases the high muck-a-mucks themselves, had the Show times of their lives. In fact, I believe that when it comes to taking someone out in an automobile just to show the someone in question how beautifully the car runs and how capable you are in your control and direction of it, it is as the poet says:

Another girly,
Now and then,
Is taken by the
Best of men.

At least that is the idea I got of the affair from what I hasten to assure you was an entirely impersonal view of the combined effects of the strenuousness of the showman's calling and a temporary lodging on or near the great white way.

A GOOD beginning is half the battle. Start right and you have every reason to suppose you will finish the same. The hardest part of driving an automobile is the laborious, undignified and dangerous "cranking her over," wherein a fool is on one end of a crank and a motor on the other. If you want to start right, go right away to the Auto Improvement Co. and don't leave there until you have had your car equipped with the cleverest little comfort maker I have yet seen. The little contraption is called by its makers the "Ever Ready Starter," and it lives up to its name. The idea of the invention is to automatically start any gasoline car or engine merely by pressure upon a small release pedal. After starting the engine, the "Ever Ready" is automatically rewound by the engine the moment it has acquired a sufficient speed, then, when the starter has been fully wound up, it is automatically disengaged from the engine. This rewinding and releasing is accomplished in a few seconds, and is entirely automatic. After the starter is wound up and automatically disengaged, it may remain unused for any length of time, being ready at any moment to be thrown into operation for the purpose of starting the engine. This is true whether that interval of time of its disuse is a moment, a month or a year. The starters are made in two sizes, for large and small cars respectively, and the makers guarantee positively that they will start any type or size of gasoline engine without effort on the part of the operator, or without his leaving the seat, all of which dispenses with the annoyances and dangers of cranking, since back kicking will not injure you or the apparatus.



SOME things they do better abroad than we do them here in America; then again some things they do abroad we would never think of doing in America. It is a wise man, therefore, who first makes sure of his ground before he attempts to introduce his home fashions in any foreign country he may temporarily be sojourning in. Failure to recognize the varying ethics of two countries recently caused the foreign representative in this country of a widely known car made in France to spend considerable money on a luncheon which it would have profited him more had he not given it. You see in France it is just the reverse from what it is here; over there the less you find to read, either advertising or news, in a paper, the more prosperous the paper is sure to be. The French journalistic idea is that there is more money in making people pay to keep things out of print than there is in following the American idea that the people should pay to see themselves and their businesses written up. You all know how much of a row has been kicked up among faddites and fanciers by the introduction of the French idea in journalism here in New York, but the gentleman who gave the luncheon failed to appreciate all of this. He went to a French café, contracted for the luncheon, sent out his invitations to the press and waited. He is still waiting.

True the press representatives came, they lunched and they were prepared to feel kindly toward their host had he not committed the faux paux of making it very plain to his guests that they were expected to pay for their food by taking care, in print, of the particular car the host represented. You can imagine the rest. In all the stuff written about the automobile during the show time, the luncheon giver's car never got a mention. You see, according to the French idea the luncheon giver did not think it necessary to buy advertising space in a businesslike way at the business office of the paper, he thought it would be enough to buy those who wrote by giving them something to eat, as though they were a lot of half-starved beggars. But, as I said in the beginning, there are some things which suffer a sea change when they are transported, and this French idea of the value of a man's services who earns his bread and butter with an occasional piece of pie by his pen is one of them.



WELL, we voted \$50,000,000 for good roads in New York State all right at the last election and now the politicians are trying to figure it out just what's the best way for them to get their share out of all these millions. Until this very important question is settled you can be sure there won't be any roads made better or worse by means of any of that \$50,000,000 or the lack thereof. Senator Armstrong, who was the head of the recent legislative

investigating committee which shook up the big life insurance companies in such a startling fashion, is chairman of the joint committee on highways in the Legislature, and he fathered the good roads act introduced by the League of American Wheelmen and passed several years ago. Whether this \$50,000,000 now made available by the vote of the people at the last election ought to be distributed among the counties on a per capita basis, or whether it ought to be apportioned according to area or assessment valuation, are questions which will have to be decided by the Legislature before a cent of it can be expended. Whether the money ought to be spent immediately, or whether it should be available to the towns as applications are made for new roads, are other questions which will have to be settled. Fifty-one of the fifty-seven counties in the State have applications in now for 7,000 miles of improved roads, and the State Engineer now has on his list ready for construction 1,300 miles of roads, but when any of these will be available for actual use by automobilists or others is something only time and the politicians can tell.



A MAN up in Peekskill has amazed the municipal authorities of that town by demanding \$3,000 for "a few old trees" of his which they cut down in the course of something which they called "road improvement." Naturally enough, the Highway Commissioners regard the claim as absurd, and the "Supervisor," it is reported, "thinks that \$3,000 would buy a great

many elms or oaks or any other kind of denizens of the forest." Of course he thinks so—all officials of his class do, and marvelous care is taken in most American cities to elect only men with opinions like his to the position he holds. If the Supervisor were once compelled to see how many trees of the size of those cut down he could plant at the side of a highway for \$3,000 he might change his mind on the subject. Timber is one thing and trees living and growing in places where they are wanted are things of quite another sort. So long, however, as a large part of each community holds that \$3,000 is a preposterous value to place on "a few old trees," shaded streets are out of the question for those who, like the automobilists, appreciate their beauties.



A MIGHTY good friend of mine who if he believes anything at all it is that this little old town of New York is a good enough place for any one, had to go out to Chicago to arrange for the exhibit of the concern he is working for at Brother Sam Miles' Mastodonic Marvel of Motor Manufacture, or, in language less circuslike, the Automobile Show. When his labors were ended he skipped off to Mount Clemens to get in shape for his labors in the show itself, and this is the letter I got from him dated Mt. Clemens, a few days ago:

"Have you ever spent five days alone with your soul in Chicago? To begin with, it isn't a city; it's a geographical ulcer. The bacilli who inhabit it defy analysis. You can walk for ten hours without meeting a clean shirt or a clean conscience. At the

end of two days I felt like the illegitimate child of Lucretia Borgia, by Benedict Arnold. At the end of four I was a moral Caius Marius, sitting among the ruins of the Ten Commandments.

"After Chicago, what was left of me came up here for repairs. This is a sort of medical Saragossa Sea to which nearly all the physical wrecks of the nation finally drift. Here they bathe in a delightful mineral water which can be reproduced at home by placing a gross of cheap matches in a tub of water and leaving them to soak all night. A person who can use all of his limbs is the object of gossip and suspicion. The man who could walk went away yesterday, but we are cheered by the rumor that another will arrive to-day who can use both his hands. And it is among these surroundings that I seek to eliminate the remaining R's of this rotten winter—remorse and rheumatism."

I'll admit that the picture is a trifle highly colored and it may be somewhat off in perspective, but I know the artist responsible for it does not regard it as within a million miles of the facts, but then he's an enthusiast and often an extremist as well.

After toiling ten years at the wash-tub to support a worthless husband, an Ohio woman sued an obliging automobilist because he did not prevent his car from running over him.

THE twists and turns of automobile finance are difficult to understand. For example, if anyone can tell what the game is when he reads these two advertisements which appeared side by side in the New York papers he's wiser than I ever hope to be:

"We have secured the entire and ex-

clusive 1906 Mercedes Agency in U. S. and Canada. Smith & Mabley, sole agents, 1906 Mercedes. Sole agents for Mercedes Import Company, representing C. L. Charley, Paris."

"Important Notice. 1906 Mercedes Automobiles can be purchased only from The Mercedes Import Company, sole representatives in the United States and Canada for C. L. Charley, Paris."

The whole thing looks to me as if it might be another shake down of that famous Parisian individual whose connection with the sale of the celebrated German machine has been one long unbroken record of "ways that are dark and tricks that are vain." In the meantime, while this new double-cross is being worked out to a finality, the wise man will take no chances of buying into a law suit; he'll just place his order for any one of a dozen good American cars and know exactly where he's at.



MY friend, Colonel Reeves, who, when not too busy pushing forward the publicity material for the very many concerns and people who recognize Colonel Reeves' unequalled ability in this direction, finds time somehow or another to do a little statistizing for the benefit of a lot of us who prefer to let some one like him dig the facts up while we content ourselves with making use of them if they appeal to us, just as I am going to do now. If it was any one else but Colonel Reeves who was responsible for the following data I might, in my cussed doubting-Thomas sort of a way, be inclined to ask, "How do you know?" but as it is, I

have too firm a belief in Colonel Reeves' exactness to even harbor a doubt, much less express one, so I give you the figures as Colonel Reeves gave them, with no other comment than "Ain't they wonderful?"

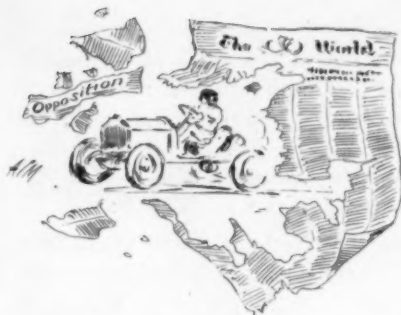
Number of makes of automobiles at the two shows	126
American cars	99
Foreign cars	27
Estimated value of the cars on exhibition.....	\$800,000
Capital of automobile firms exhibiting	\$70,000,000
Employees in American automobile factories....	32,000
Cars to be made in 1906..	40,000
Value of 1906 productions..	\$45,000,000
Number of automobiles in U. S.	70,000
Number of autos in New York State	23,000
Autos in New York State in 1901	954

From these figures you will see that there is on an average one automobile to every 1,000 people in this country, while the capital invested in producing that average seems to call upon every person in their entire country to cough up a dollar. From this and a few other things you, yourself, must have noticed it seems fair to remark that the automobile has a great future before it, even while its present isn't so insignificant as to warrant it being sneezed at.



THERE isn't any getting away from the fact that the world always did love a plunger, and it always will do so, I believe. You can't enthuse very much over a piker who plays them so close that he won't let

himself win. It's the good old red blood in a man's veins which causes him to admire the man who stands up four square and bids all who will to come against him if they doubt his ability to deliver the goods. I am not acquainted with Mr. Harry S. Haupt, never saw the gentleman in my life, and wouldn't know who he was if I did see him, so I am not open to being accused of playing favorites when I say he's just about made the running here in New York for the entire bunch, it apparently being a case of Mr. Haupt and the Thomas first, and the rest in the ruck. When a man has the confidence in himself and his business sufficient to induce him to take whole pages in all of the leading New York dailies upon which to declare his belief that there is not another car to compare with his, while at the same time he produces the proofs to bear out this belief, I want to tell you that the public is going to come mighty near having that very same idea, too. There are entirely too many people in the automobile game to-day who have not wakened up, as Mr. Haupt certainly shows he has, to the fact that you can't run an automobile business like you would an undertaker's shop. When it comes to selling automobiles you've got to advertise, and you've got to say something in your advertisements, and furthermore you can't say that something too loud or too often if you want to make the public bring their money to you. Mr. Haupt has the real thing when it comes to knowing how to advertise, and you can take it from me that he'll get all the money before the old grandmas in the game get wise enough to quit their astonished gazing over their glasses and try too late to adopt the Haupterian system.



IN full possession of that mutton-headed determination, some people and some papers occasionally exhibit, the *New York World*, true to the role it has ever played of declining to recognize the automobile as other than a thing to be held up to ridicule and injury, chose the rather strange time of the opening of the two great automobile shows for the appearance of a full-page blood-curdling arraignment of the automobile. According to the story the *World* told there are 85,000 automobiles in use in the United States, and last year there were fifty-nine persons killed while riding in some of these 85,000 automobiles. Allowing one hundred trips a year for each automobile, and three passengers each time, the *World* figures it out that everybody in the United States averages, roughly, a third of a trip a year in an automobile, or one-twenty-seventh the number of their railway trips. Then there should be one-twenty-seventh the number of deaths, or twelve deaths. But there are fifty-nine, or five times as many. In other words, the *World* has it all figured out; there is five times the chance of getting killed while riding in an automobile that there is when riding in a railway train. I don't exactly make out just what game the *World* is playing in its continued attack upon the automobile, but this I do know, it is a losing

game from start to finish, since all the newspaper worlds in this old world of ours combined could not stop or stay the coming of the motor car into its own, and that own comes mighty near being about all there is in the traffic and transport line. Some day even the *New York World* will learn this, but in the meantime it will, I suppose, continue playing the lone star part in that expensive and not highly edifying spectacle known as "kicking against the pricks." Well, the rest of the world can stand it if the newspaper one can, that's sure.

When friendship blinks at your check-book you may know it isn't friendship, but merely friendship's parasite. Real friendship has no eye for money.

THERE is an awful lot of satisfaction in being able to say, "Well, didn't I tell you so?" Now the big dailies and the Automobile Club of America have gone on record as being opposed to the use of those blinding, unnecessary and ugly searchlights which, however desirable they may be on a man-of-war or a locomotive, are entirely out of place on an automobile. I have preached this very doctrine for more than a year on these pages, so you can imagine I feel complimented to find that at this late date others are publicly agreeing with me. Perhaps now we may have a law similar to the ones in force abroad, forbidding these blinding, public irritating monstrosities from being carried on the cars of those whose delight it seems ever to be to follow as closely as they may in the footsteps of that departed plutocrat who is credited with having been the first to openly proclaim the doctrine of "the public be damned."



YOU know you can't just go to a girl in France and say, "Will you marry me?" get her favorable reply and then break the news to father. That is just exactly what you cannot do. In fact, you and the girl haven't got any more to say about who you will marry than if you were not taking any part in the ceremony at all. Of course sometimes, even in France, "love will find a way" to have its own way and an elopement is the only means to compel papa and mamma to give their consent. It would be much simpler to give it at once. But if men always took the simplest course life would be too easy. Two hundred years ago such an elopement would have been carried out with horses, cavaliers and swords; nowadays motor cars, chauffeurs and pints of petroleum adequately supply their places. Modern invention invades every branch of our existence—even elopements.

A few weeks since in Paris a young man who passionately loved a certain young lady called at her father's house with a friend in a motor car. He was disguised as a chauffeur in a bearskin overcoat and big goggles, rendering him completely unrecognizable. The young lady entered the car, ostensibly for a short ride. Crossing Versailles the friend asked the supposed chauffeur and the young lady passenger to stop, as he wanted to buy some postcards; when he came out of the shop the motor car had vanished. The best of the story is that he, himself, did not know of the intended escape. Later on father

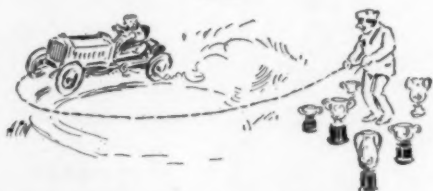
and son-in-law became such good friends that a few days after the disguised as a chauffeur's marriage to his daughter had been forgiven, the old gentleman got a bill from his daughter's husband, who was a humorist, which ran as follows:

Motor car hired for four days...	\$100
Damages for two dogs injured...	250
The same for an old woman....	50
Picture postcards to friends and acquaintances	10
Eau-de-Cologne, violette, heliotrope for Suzanne (who could not bear the smell of the lubricating oil the car used).....	25

\$435

Ten per cent. discount since I married Suzanne.

And yet there are those who say that this is not a purely commercial age in which we live and that romance still exists just as it always existed from the beginning of the world. Do things like this bear out that idea?



FORMERLY it was the custom in all well regulated newspaper offices to make a yachtsman out of every man who for any reason won an unenviable notoriety of a certain kind. Times change, and some papers change with them, hence yachtsman is no longer the newspaper synonym for being "a devil of a fellow," but automobilist racing, preferred, is the real up-to-the-minute mark. I was amused to see how this rule was applied recently in the case of a young man who achieved newspaper noto-

riety by being accused of being on too friendly terms with the wife of a pugilist. The papers in their anxiety to make the accused young man a modern Lochinvar used up heaps of space recording his desperate automobile racing and how he had one entire room in his Pennsylvania mansion filled from floor to ceiling with the trophies he had won by his desperate courage on track and road. Now the facts of the case were that the young man never won anything, though his money did, he having owned a big racing car which he had a hired man race for him, which of course called for as much courage on the owner's part as outfitting a Polar expedition demands from the millionaire who pays the bills. By any such reasoning as the newspapers applied to this young man from Pennsylvania, James R. Keene is the greatest jockey in America, J. Pierpont Morgan the foremost painter, sculptor and designer in the world, and I am the fractional part of a master mariner because I own a sixteenth interest in a trading schooner.

IT cannot be denied that Webb Jay knows whereof he speaks when in a newspaper interview he thus lays bare the peculiar abseption which belongs to the speed merchant. Says Mr. Webb:

"Let a man put his hand on the steering wheel of the modern gasoline fed, steel skinned, racing monster, let him acquire the mastery of all the little levers and the mechanical centers that stir it into life—and let him know the wild joy of making it carry him over the earth at the space annihilation clip of ninety or a hundred miles an hour and he becomes a victim forever. The ebullition of riding a cyclone whizzing through

space with the air needles nipping one's face and the landscape a fluttering ribbon before one, is something that, once tried, is never forgotten."

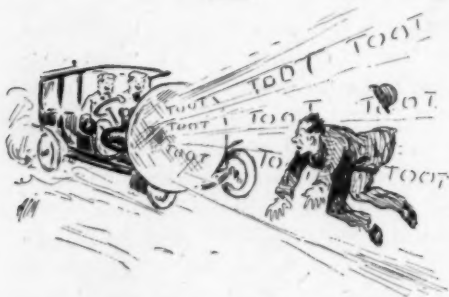
Now maybe you can understand why we scorchers find it so blooming hard to quit our foolishness.



WE got "garage" from our British brethren and we are duly thankful therefor, but when it comes to taking on "gazebo," I must confess I'm a bit inclined to throw in the slow speed and get the brake ready for instant and decisive action. Perhaps you'll have a more decided opinion as to the possibility of "gazebo" if I tell you just what and why it is. Now don't get this British importation mixed up with the Yiddish one of "gazabo," because really they are in no wise related. Neither is the new Briton a zoological freak of any kind, as one might be inclined to think it was offhand. In the good old days of long ago when the Corinthian coachman was in his glory and the tide of traffic continually ebbed and flowed along the great British trunk roads, no house was complete without its "gazebo," to which the residents resorted to watch the passing of the coaches. It was so situated that it commanded a view of the traffic in both directions, but since the railways killed coaching very few of the little houses have been utilized for their original purpose, most of them having been converted into cottages or left to decay. With last summer, though, there was a tendency again

to use the "gazebo" as a lookout, and as the road becomes more a highway for pleasure and trade, it may have another vogue abroad and then imitated here. But I'll bet that the American lookout will never be called a "gazebo" though.

It is announced that the Argentine Automobile Club is organizing an automobile exhibition to be held in Buenos Ayres, the Paris of South America, next September. Foreign exhibits will be admitted free of duty, provided they are re-exported within ninety-one days.



AS a rule complaints, abuse and advice which reach me through the mails are of such little consequence to any one except the writers of the letters wherein the protests are made that I waste little time in making the communications and the waste paper basket intimately acquainted. But there are exceptions to all rules, even to this one, and exceptions are always worthy of some attention, hence I take pleasure in making public the following communication which it seems to me does not greatly overstate the condition of affairs as they appear to citizens who are really fairminded and are not prejudiced against the automobile per se. Here is the plaint of my unknown correspondent; judge for yourselves if he does not make out a

strong case against the heedless hoodlum of the horn:

"I am a man of no great importance in the world. My house is only a two story and basement brick house in a quiet street in Brooklyn, where the ailantus trees still survive, with their pungent smell. But I have a grievance on my mind that must have utterance or I shall bust, explode, spontaneously combust or do something that will bring me into notice. My grievance is the insolence, the utter recklessness of the automobiles in this city and their insulting horns.

"Who give you automobilists the right to blow horns in the street? Can a truck driver carry a horn? Can a carriage; can a peddler; can a pedestrian? What right has a fat-necked banker to come whirling up a crowded street from his country house with a hairy chauffeur tooting an angry, raucous, nerve-killing horn, making me almost jump out of my skin lest I be run over? Who gives him a right to seize the street for himself? Can a carriage do this? Can I get a right of way up Nassau street through the bridge crowd and home by blowing a horn in front of me and scaring citizens, old, young and middle aged, so that they jump out of my way? Is there no obligation upon an automobilist to warn people with moderation and with some restraint upon their own movements, such as drivers' carriages must show, because of their inability to communicate their notice unless they give an opportunity to foot passengers to hear them?

"I want to sound a declaration of war against the automobile horn. It was devised, I have no doubt, with the idea of protecting the public. But the result of its use is that it has relieved the automobile from any duty except blowing its accursed horn. The

chauffeur toots his horn and you do the rest. He blandly says in court: 'I did everything I could to avert the accident. I blew my horn, but the child failed to take notice.' And the Court says: 'It was an unavoidable accident.' I occasionally drive on the roads outside of Brooklyn, and an automobile comes up behind me with a rush. I turn out like a slave at the sound of the horn, lest I be wrecked and possibly killed. Has that automobile any right to do more than a wagon—that is, come up behind, slow down and request that it may pass?

"Many and many a time in my drives I have seen scenes that reminded me of the recorded tales of how the ancient lords of the manors rode imperiously through the villages, spurning the villagers from their horses' hoofs. Are we becoming like slaves of these impudent automobile owners? Let us end this nuisance! I call upon all truck drivers and citizens to carry horns and blow back at the scorchers as they hog the high roads. Let old, young, middle aged, join the crusade. Let us all march, or ride, or walk through the highways, making ourselves such nuisances that the authorities will have to restrict all horn blowing. Then, when all observe the same rules of the road, the automobilists will be compelled to keep their places, and they cannot be licensed to run over us just because they have warned us. Out with your horns, fellow citizens and truckmen! We humble footmen are freemen. Out with your horns and blow for life, liberty and a share in the equal enjoyment of the streets! To arms! To horns!"

Well, isn't there some truth in what he says? Seems to me there is

a blamed sight too much truth in it for us to be very proud over our position in the affair.

Habit is a good friend but a bad enemy. The habit of continuing to use an unsatisfactory car or equipment thereof, year after year, without trying to replace them with something better is an enemy that is never worsted.



VERILY this automobile game is getting so far-reaching and its ramifications are so many and so varied that I really don't know where it is going to stop. Just at present it looks like there wasn't going to be any limit, and eventually everything from a church to a cheese sandwich will in some way or another be grafted to, on or by an automobile. Take this testimony before the stern and grizzled officers who are now investigating the iniquity of hazing at Annapolis: The first witness for the prosecution was Midshipman Max B. Demott, of the fourth class. He said that he had been in Miller's room one night, he having been told to go there imitating an automobile with Canine, Cooper and Donelson. Canine was the headlight, Cooper the chauffeur and Donelson the horn, and Demott the exhaust. Cooper was supposed to twist Donelson's ear to stop, but he fell down and they went around the room several times. Miller then told them to do the "sixteenth" and they did it.

Now I don't know just what "sixteenth" is, but leaving that out of the question entirely it still seems to me that hazing is about one of the last

things I would expect to become automobilized, but as it is here shown as having already become affected by the all-pervading craze, I think I am well within bounds when I said in the beginning of this item that I really couldn't see the limits to the automobilization of the world which it seems certain it is rapidly coming to.

GEE! but that was a stunnin' poster girl the Madison Square Garden people turned out in the cold, with mighty little clothing on, to advertise the Garden show. I don't think Anthony Comstock would ever allow a lady dressed, or rather not dressed, as she was to parade up old Broadway, but as long as she remained safely stuck up on a dead wall, I suppose it was all right, though I must admit that from either a physical or a mechanical standpoint the lady's pose and position on that poster could not have been other than tiresome. Over at the Armory they still held on to that baby-faced, pyroxyhded blonde, who in a summer costume of years ago remained, as she has for so long, seated in an old De Dion of the vintage of about 1890, looking as little like a motor woman of to-day as the Statue of Liberty off the Battery does. Still, after all, they were both nice girls and there wasn't anything wrong with either of the ladies further than one had too few clothes on and the other too many—at least of the out-of-style kind they were.

VERILY no man can foresee to what length revolution of traffic will be brought by the all-conquering automobile. The adoption by western steam railroads of gasolene motor cars for short-haul passenger traffic points to one of these interesting possibilities in traction development.

These cars were first brought to a state of operative efficiency by the Union Pacific. On recent trials on the Chicago and Alton they maintained a speed of thirty-five miles an hour at a minimum of expense. They have been used experimentally on Oregon lines, and it is now announced that the Illinois Central will equip its Chicago and New Orleans suburban trains with this motive power. They do away with costly power houses, third rails and trolley wires. They enable all steam railroads to meet local trolley competition easily and at small expense. Are they destined to replace the trolley car? If, as seems likely, they make rural and interurban communication only a matter of right of way and rails, they should greatly facilitate transit and incidentally herald the day of reduced fares.

YOU can't send to a foundry and get motors that will do what you want them to just for the asking. In the early days this idea was held by quite a number of at that time leading lights in the trade. The result of the idea was that a whole lot of cars were sold to unsuspecting people who, when they came to run the cars, soon found out that the motors in them were not worth enough to pay for the powder to blow them up with. But that day's gone by, thank goodness, and we'll never see any more like it. The people who buy automobiles at present are a different breed from those who bought the wonder wagons some of the pioneers in the trade robbed them with. As a class buyers to-day are of the Missouri type—you've got to show them. Hence it is that motor testing rooms in an up-to-date automobile plant are mighty interesting and mighty im-

portant places, I tell you. In the Pope-Toledo factory, as an example, twelve engines at once are tried out by being set up on metal and run thousands and thousands of revolutions with the brakes attached. What's the result? Any defects in the motors are discovered in the factory, the right place to find them out, and when the buyer of a Pope-Toledo car is told he has a motor rated at such and such a horse power he believes it, because he is certain the maker of the car knows exactly what the motor will develop from his own tests, not from any old iron foundry guess.

AFTER an attempt to be in two places at the same time and not let anything at either of the two shows escape me, I finished a week consisting of a continuous round of dining, wining and entertaining with the positive conviction that most of us whose duty or whose pleasure it was to be present at the shows and their many and varied functions, were all and severally in a position to insert an advertisement about along these lines:

FOR SALE OR EXCHANGE—One complete set of New Year's resolutions, slightly used. Rare opportunity for those contemplating purchasing. Good reasons for wishing to dispose of same. Address Automobile Shows, care of any exhibitor.

SUPPOSING five years ago someone had woke you and told you that while it was true that from all Italy during that year only six automobiles, valued at \$7,200, had been exported, but that nevertheless within the next four years this exportation would have advanced to 257 cars valued at more than \$500,000 you would have laughed at the very idea, wouldn't you? And yet that is ex-

actly what has happened, the whole thing being the most convincing of all arguments in favor of how it pays to make a good article and then to advertise it energetically and persistently, since the Italian automobile, without this advertising, would have still remained a thing known only to its makers and to the comparatively few Italians rich enough or progressive enough to purchase it.

FOR years there has been an unwritten but nevertheless very strictly observed rule among the real aristocrats in New York that it was very bad form to drive to church on Sunday unless stress of weather actually compelled one to bring out the horses. New conditions, however, have seemingly made it quite the correct thing to ride to church, but still the horses must not be used, only the motor car being permissible. The consequence is the church and the choo choo are very intimately related in those neighborhoods where those possessed of a plentitude of the world's goods are wont to worship.

IF it be true that figures can't lie the following should be most truthful of all indicators as to the direction the mind of popular favor is blowing. Of 145 different models shown in Madison Square Garden, 85 were gasoline, 12 were steam and the remainder, 48, electric. In frames, 116 were pressed steel, 20 armored wood, and 9 structural iron. Not less than 107 cars showed semi-elliptical springs and flanged front axles. Of the gasoline cars, 85 were water cooled and 13 air cooled. There were 82 four-cylinder, 4 double opposed horizontal cylinders, 2 with vertical and 4 with single horizontal cylinders; 2 only had six cylinders. Jump-spark was used on 70 per cent. of all cars, the remainder re-

lying upon make and break. Magneto'es claimed 24 and both batteries and magneto'es 22.

QUICK to accept Mr. Morris' plea for taxing automobiles, Senator l'Hommedieu has introduced a bill in the New York Legislature imposing a tax on all motor vehicles at the rate of \$1 per H. P. The revenue from this source, Mr. l'Hommedieu estimates an income will be derived which will amount to at least \$400,000, and he intends this to be devoted to the improvement and maintenance of State roads. "There is no doubt in my mind," said Senator l'Hommedieu in an interview, "that the bill will be passed at this session and signed by the Governor. We are about to expend \$50,000,000 on good roads. Automobileists virtually have accepted the provisions of my bill, but there may be an amendment to except motor vehicles of ten H. P. and less, for in this class are to be found motor delivery wagons and the like."

Automobile week is always a gala occasion for one of the strangest of Manhattan's curiosities, the Gildus Kid-dus. At such times he can always be observed in most of the cafés. It is, if caught in its younger days, quite harmless and can be taught to eat from the hand, and even to blow the horn on an automobile, if papa will buy it one.

OF course, there isn't anything automobiles are not responsible for except perhaps the supplying of brains to those who blame everything good or bad that happens to them, but I'll be jiggered if I thought that it would come to pass that the car of progress would be charged

with being responsible for a recent advance in the price of Bibles! Candidly, I thought if the automobile had affected Bibles in any way it would have been directly the reverse of increasing their price, since I am almost certain it must have decreased the use of all books, including the Bible. Evidently I am not on to my job, since according to the London *Guardian*, the Bible Society is between the horns of the dilemma of either increasing the price or selling its Bibles at a greater loss, because the cost of leather suitable for bindings has doubled in the past year, owing, as the *Guardian* so naively puts it, "to the craving for patent leather shoes in America and the new demand for leather for motor cars."

Now what do you think of that?

Never forget when it comes to trying to depart from the conventional, either in the car or its equipment, that if you are right your enemies will think you are wrong, and if you are wrong your friends will think you right, but the cold, calculating world will get at the facts in the end, no matter what anybody thinks in the meantime.

WHEN you get right down to brass tacks, if you can beat the proposition E. V. Hartford stands ready to make to all those gentlemen who say they want a car that is a world beater, I don't know how you are going to do it. To those who are willing to back their talk with their money Mr. Hartford stands ready to turn out automobiles, as many of them as they will buy, which he guarantees will make one hundred and twenty miles an hour on the road, mind you, not on a beach, an ice track or any other superlatively

favorable surface. In case the car he builds for you fails to do this, you don't have to take it. How's that for having faith in the claims you make, eh? Mr. Hartford, whom everybody knows from his successful presidency of the famous Hartford Suspension Company, a concern which has done more to make fast and comfortable automobiling than any other, thus explains why he is prepared to make such an extraordinary offer:

"The feature of the Gobron-Brille car, which is the one I would offer those who care to accept my proposition, is that the explosion is in the center of the cylinder. The result of this arrangement is that one piston goes up and the other down, supplying double power with less gasoline consumption. In an ordinary four-cylinder car the explosion takes place at the top of the cylinder and the piston goes down, while the remainder of the charge is lost against the head of the cylinder. The Gobron-Brille patents have five years to run, and most of the European manufacturers are trying to secure a motor of some sort that will be as flexible as Mr. Gobron's. So certain is Mr. Gobron regarding the speed of the car that I am ready, as you have heard, to take an order for a racing machine which I will guarantee to travel two miles in a minute or no sale."

Talk about faith moving mountains, but here's the real thing in the faith line and it's no faith cure gag either.

SOME smart Aleck is out with the theory that the up-keep of a car is a mathematical question based entirely upon the number of cylinders the car has. S. A. says it costs twice as

much to run a two-cylinder car as it does to run a single cylinder one; it is four times greater with a four-cylinder equipment and six times more with six cylinders and so on to the end of the ratio table. Some one ought to take this particular S. A. out behind the barn and try the efficacy of repeated and favorable application of a monkey wrench to that part of his anatomy where nature would have put his brains had she given him any.

BRITISH automobilists anxious to erect a sign cautioning users of highways against a particularly dangerous railroad crossing, applied to the railroad company for permission to erect the post on which the sign was to be mounted upon the company's property. The railroad officials, recognizing the need of the sign, at once notified the philanthropic automobilists that they could place the needed post upon the railroad's property if they paid the company five shillings per year for the privilege. Strange to say, the automobilists absolutely refused this generous offer of the railroad company.

"Don't sniff at her near-sealskin coat," says one smart fashion hinter, commenting on Miss Shoddy's appearance as ornament in some of the cars at the show. Why not? Near-furs are quite correct, pray note, to wear in this near-winter.

The shows have come and they have gone, and many are the things they have taught the tens of thousands of people who flocked to them, but perhaps no other lesson was so well taught to the show-goers as the conviction that the day of the cheap automobile has not yet arrived, nor

could even the most confirmed bargain scenter lay claim to discovering anything which would cause the belief that the coming of any such day was near at hand.

YOU can't dodge the tax collector in France. He gets you coming, going and standing still, so when this gentleman estimates that there are at present in France 21,523 automobiles, aggregating 179,361 H. P., and in the Department of the Seine alone, which includes Paris, there are 4,627 machines, you can be sure that he isn't very far off his job. To the average man the number of cars thus credited to the whole of France will seem rather small, particularly when it is recalled that the registrations in the State of New York run well up over the 15,000 mark for the year just passed.

A bench of seven magistrates at Walsall, England, announced that they were "equally divided" in opinion as to the guilt of a motor car owner charged with exceeding the speed limit and that no decision would be given.

W. Gould Brokaw has placed an order with Audineau et Cie, the Parisian body makers, for three special bodies to be finished in a uniform manner, in a pearl gray with gold stripings and upholstered in morocco and cloth of the same color. One, a limousine, will be the most complete thing of its kind ever built. It will contain seats which can be turned into a berth, washstand and toilet arrangements; an ice box, a lunch hamper, electric lights and electric signal box. The second of Mr. Brokaw's trio is a touring body fitted with a victoria top, and is to go on a 70 H. P. chassis, while the third is intended for an inside driven cab, to be fitted to a 10 H. P. chassis.

America is not to have a monopoly of "the master patent" graft. Now comes a French concern which points to a court decision that in the matter of master patents it has one on the "direct through drive," whereupon there is intimation that all interested step up to the captain's office and settle. This "master patent" game's a fine thing until some one attempts to play it on the tit-for-tat basis when it at once threatens to become just a bit tiresome, as it were, particularly when as in the present case you are expected to pay \$40 per car for the use of the aforesaid master patent idea.

This sign occupies a prominent position in an auto shop, the proprietor of which has learned the necessity of it from sad and expensive experience: "Notice—The credit department is closed for repairs."

YOU never can tell what the Board of Appraisers are going to do when you seek to bring into this country something from the other side. For example, Mrs. C. P. Huntington, in October, 1901, purchased an automobile in Paris for \$10,000, and brought it to America in February, 1902, paying \$4,500 duty. In the spring of 1903 Mrs. Huntington again visited Europe, taking the automobile with her. When she came back in 1903 the machine was valued at 10,000 francs and it has now been decided on her appeal that she must pay a second duty based on the new valuation of the machine.

Liquid carbonic acid under pressure allowed to expand in a cylinder which rotates the main engine through pinions, is the latest French idea of how to do away with the lazy man's horror, "cranking her over."

FRANK EVELAND is back from his annual trip to la belle France, where he goes to be sure that the wily Frenchmen do not steal a march on the wideawake Americans of which latter Mr. Eveland is an excellent example. He says that while there yet remains many things concerning cars and their equipments which we can learn from France to our profit and advantage, the rôle of educator is not so entirely French as it once was, and America is quite able to open a school of her own wherein even France may come and study to the betterment of herself and her products, too.

In the four States of New York, New Jersey, Massachusetts and Connecticut there are as many automobiles as in all France, while in the United States there are more motor cars in use than in the whole of Europe.

An attempt is to be made by the International Association of Automobile Clubs to boycott Switzerland until such time as the land of the high altitude and the hotel shall have become duly impressed with the necessity of treating the touring automobilist as something other than a stranger to be robbed and attacked by every yodling yokel who thinks because he sticks a feather in his hat and wears hob nails in his brogans that he owns Switzerland and all who may visit it.

Most people would think that motor car goggles and masks were such unbecoming things that no one would willingly assume them unless compelled by the exigences of the road. That an elaborate Bal masqué should be arranged in which the guests are to disguise themselves in motor gog-

gles till midnight, certainly strikes one as belonging to the category of those unexplainable peculiarities so characteristic of the modern world which has been responsible for monkey dinners and the like.

In Great Britain they are demanding that upon much-traveled highways the authorities shall henceforth provide public stations where motor cars may take on a supply of water just as the horse is now provided for at public expense.

"Steam ox" and "steam camel" are the names given to automobiles by the natives of German Southwest Africa. It would not be polite to tell what the natives of our own dear America call the automobile, but it is a mighty sight worse than "steam ox" or "steam camel," you can bet on that.

Up to the present the automobilsky has become neither a public evil nor a convenience in the land of the Czar since in all Russia, including Poland, the Caucasus and Finland there are but 1,500 motor cars of every kind, hardly enough to carry escaping Grand Dukes away from the irate peasants who are now so joyously chasing the erstwhile autocratic G. D's.

Judge Thayer, of the Connecticut Supreme Court, whose ability to decide upon the merits of a case purely from the standpoint of the evidence presented for or against a thing is world wide, after going over the ground in thorough fashion, has decided that the Frayer-Miller presents the most arguments in its favor, so far as he is concerned, and henceforth he will entrust the Columbus-made vehicle with the task of carrying him.

WHEN one reads of a race of 5,000 kilometers, or 3,100 miles, through Europe, the thought naturally comes—they must be careful not to run over the edge. The risk is likely to be taken, for the International Conference of Automobilists, held in Berlin last month, has decided to hold an automobile race of 5,000 kilometers through Europe during the summer. The race will probably take place in August. Starting from Paris the route will be through Germany, Italy, Austria and Hungary. The finish will be at Paris.

“Motician” is the latest. It’s a heap sight better than chauffeur, even if it is a long way from being the ideal word for the purpose.

When a car must be driven through the rain, a great deal of subsequent work and worry can be avoided if all bright parts are given a coat of vaseline. With such a coating there is no immediate necessity for wiping down and polishing such bright parts, since the grease prevents the rain from spotting and tarnishing them, and in its turn it may be readily removed at any time. Should any plated parts become tarnished they may be restored to their previous brightness by the use of silver polishing powder and a little liquid ammonia.

Wise old Philadelphia has been prompt to recognize the outrage of the searchlight, and henceforth no automobile equipped with a nuisance of this description will be permitted to enter Fairmount Park.

A novelty in connection with the British elections for members of Parliament last month was the use made

by automobiles in carrying voters to the polls. This was done with malice aforethought by the Automobile Union, which seized the opportunity to give as many of the general public as possible their first experience in motoring, with a view of diminishing the prejudice against autos. One candidate employed eighty cars, and another one hundred for the purpose of bringing voters to the polls.

The gift of gab is all right at times, but the gift of holding the tongue is all right at all times.

When a man travels 6,000 miles in fifty-six days in an automobile for the purpose of visiting and inspecting local agencies, as C. G. Beasdale, of the Maxwell-Briscoe Motor Car Co., has just done, it can be truthfully said that he has driven home the merits of the car as well as the up-to-the-minute methods of those who make it.

Rev. Dr. Hillis thinks it wrong to go to church in an automobile. Still, people go in automobiles to worse places than that.

The average production of gasoline in the United States is about 40,000,000 gallons, of which half is exported.

It should not be forgotten that exhaust gases contain ingredients of a highly poisonous nature. Therefore, when the engine is run while the car is in a building be sure to have a door or window wide open so as to ensure free ventilation.

With this paragraph my work on THE AUTOMOBILE MAGAZINE comes to end, and I become in fact as well as in name,
THE OUTSIDER.